SECTION 23 00 00 - MECHANICAL GENERAL REQUIREMENTS

PART 1 - GENERAL
1. THE TERM “TENANT,” “TENANT'S CONSTRUCTION MANAGER,” “OWNER,” OR “OWNER'S CONSTRUCTION MANAGER” SHALL REFER TO SWEETGREEN.
2. THE GENERAL CONTRACTOR SHALL PROVIDE ALL MATERIALS AND LABOR AS REQUIRED TO PROVIDE A COMPLETE WORKING SYSTEM AND AS DESCRIBED IN THESE DRAWINGS.
3. THE GENERAL CONTRACTOR SHALL REVIEW A COMPLETE SET OF THE CONSTRUCTION DOCUMENTS. EACH SUB-CONTRACTOR SHALL MAINTAIN A COMPLETE SET OF DRAWINGS ON SITE DURING THE CONSTRUCTION PROCESS.
4. COORDINATE WORK AS REQUIRED WITH THE LANDLORD. THE GENERAL CONTRACTOR SHALL UTILIZE LANDLORD-REQUIRED CONTRACTORS AT THE GENERAL CONTRACTOR'S EXPENSE.

PART 2 - PRODUCTS
1. PRODUCTS SHALL BE AS DESCRIBED IN THE DRAWINGS AND AS REQUIRED FOR A COMPLETE AND FUNCTIONING SYSTEM.

PART 3 - EXECUTION
1. UNLESS DIMENSIONS HAVE BEEN PROVIDED, THE DRAWINGS ARE DIAGRAMMATIC IN NATURE, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT AND REQUIRED EQUIPMENT. THEY SHALL NOT BE SCALED. COORDINATE WITH THE ARCHITECTURAL DRAWINGS, TENANT VENDORS AND MANUFACTURER'S INSTALLATION INSTRUCTIONS AND CUTSHEETS AS REQUIRED.
2. COMPLETE ALL WORK IN COMPLIANCE WITH THE CODES LISTED ON SHEET G-001 INCLUDING ALL LOCAL AMENDMENTS, ALL RELEVANT NFPA CODES AND STANDARDS AND SMACNA STANDARDS.
    A. VERIFY ALL CODE REQUIREMENTS AND LOCAL AMENDMENTS WITH THE AUTHORITY HAVING JURISDICTION PRIOR TO BID.
    B. WHEN THERE IS A DISCREPANCY BETWEEN THE ADOPTED CODES AND THESE DRAWINGS, THE MORE STRINGENT REQUIREMENT SHALL APPLY.
3. COORDINATE WITH THE LOCAL AUTHORITY HAVING JURISDICTION AND ARRANGE ALL INSPECTIONS AS REQUIRED.
4. MAINTAIN A CLEAN CONSTRUCTION SITE DURING CONSTRUCTION. CLEAN SCRAP MATERIAL AND REMOVE FROM SITE DAILY AND MAINTAIN WORKING AREA IN AN ORDERLY FASHION.
5. PROVIDE SUBMITTALS AS NOTED IN THESE SPECIFICATIONS AND AS REQUESTED BY THE TENANT'S CONSTRUCTION MANAGER.
    A. ALL SHOP DRAWINGS SHALL BE REVIEWED AND STAMPED BY THE GENERAL CONTRACTOR PRIOR TO SUBMITTING TO THE TENANT'S CONSTRUCTION MANAGER.
    B. SHOP DRAWINGS SHALL BE SUBMITTED TO ALLOW FOR FIVE BUSINESS DAYS OF REVIEW TIME.
6. PROVIDE REQUESTS FOR INFORMATION TO THE TENANT'S CONSTRUCTION MANAGER.
    A. REQUESTS FOR INFORMATION SHALL PROVIDE A DETAILED DESCRIPTION OF THE SITE CONDITION OR DISCREPANCY AND THE CONTRACTORS PROPOSED REMEDY.
    B. REQUESTS FOR INFORMATION SHALL BE SUBMITTED TO ALLOW FOR FIVE BUSINESS DAYS OF REVIEW TIME.
7. UPON COMPLETION OF WORK, THE GENERAL CONTRACTOR SHALL PROVIDE THE TENANT'S CONSTRUCTION MANAGER WITH A BOUND RECORD OF ALL MECHANICAL EQUIPMENT UTILIZED IN THE JOB. THE GENERAL CONTRACTOR SHALL PROVIDE THE SAME INFORMATION ON A COMPACT DISC. THE BINDER SHALL CONTAIN:
    A. COVER SHEET INDICATING THE PROJECT NAME, ADDRESS AND TURNOVER DATE.
    B. COMPANY NAME AND CONTACT INFORMATION OF THE CONTRACTORS UTILIZED FOR THE MECHANICAL SCOPE OF WORK.
    C. CUTSHEETS, INSTALLATION MANUALS AND MAINTENANCE REQUIREMENTS FOR ALL MECHANICAL EQUIPMENT.
8. UPON COMPLETION OF WORK, THE GENERAL CONTRACTOR SHALL PROVIDE THE TENANT'S CONSTRUCTION MANAGER A FULL SET OF DRAWINGS WITH ANY DEVIATIONS FROM THE DRAWINGS INDICATED IN RED INK.

(END OF SECTION 23 00 00)

SECTION 23 05 93 - TESTING, ADJUSTING AND BALANCING FOR HVAC

PART 1 - GENERAL
1. QUALITY ASSURANCE: ALL TESTING AND BALANCING WORK SHALL BE COMPLETED BY AN INDEPENDENT CONTRACTOR, CERTIFIED BY NEBB OR TABB AS A T&B TECHNICIAN. BALANCE THE SYSTEM IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING STANDARDS.

PART 2 - PRODUCTS: N/A

PART 3 - EXECUTION
1. AIR SYSTEMS
    A. PROVIDE ALL LABOR AND MATERIALS REQUIRED TO BALANCE THE SYSTEM AS NOTED ON THE PLANS.
    B. FAN SYSTEMS SHALL BE ADJUSTED SUCH THAT THE LOWEST FAN SPEED IS UTILIZED TO DELIVER THE REQUIRED CFM TO THE AIR TERMINALS.
    C. ADJUST DAMPERS AS REQUIRED TO BALANCE THE SUPPLY, RETURN AND EXHAUST DEVICES TO 10% OF THE DESIGN RATES. ADJUST THE OUTSIDE AIR DAMPER AS REQUIRED TO OBTAIN THE MINIMUM OUTSIDE AIR REQUIREMENTS AS NOTED IN THE SCHEDULES.
    D. RECORD THE OPERATING VOLTAGE, AMPACITY, SUPPLY/RETURN SYSTEM STATIC PRESSURES, SUPPLY/MIXED AIR TEMPERATURES (BOTH HEATING AND COOLING) AND FINAL FAN RPM.
    E. VERIFY SYSTEM CONTROLS ARE FUNCTIONING AS INTENDED.
2. REPORTING
    A. THE TEST AND BALANCE AGENT SHALL PREPARE A REPORT INCLUDING THE FINAL VALUES OF THE AIR AND WATER SYSTEM BALANCING, SYSTEM DIAGRAMS, AND SYSTEM NOTES.
    B THE GENERAL CONTRACTOR SHALL REVIEW THE FINAL BALANCE REPORT PRIOR TO SENDING TO THE TENANT'S CONSTRUCTION MANAGER.
    C. PROVIDE T&B REPORT TO THE LANDLORD AND THE AUTHORITY HAVING JURISDICTION AS REQUIRED.

(END OF SECTION 23 05 93)

SECTION 23 07 13 - DUCT INSULATION

PART 1 - GENERAL
1. INSULATION SHALL BE PROVIDED ON THE FOLLOWING DUCT SERVICES:
    A. INDOOR, CONCEALED SUPPLY AND OUTDOOR AIR.
    B. INDOOR, CONCEALED RETURN.
    C. INDOOR, CONCEALED OVEN AND WAREWASH EXHAUST FROM AIR TERMINAL TO PENETRATION OF BUILDING EXTERIOR.
    D. INDOOR, CONCEALED GENERAL EXHAUST FROM AIR TERMINAL TO PENETRATION OF BUILDING EXTERIOR.
    E. OUTDOOR, SUPPLY AND RETURN.
2. QUALITY ASSURANCE
    A. INSULATION INSTALLED INDOORS SHALL HAVE A FLAME-SPREAD INDEX OF 25 OR LESS, AND SMOKE-DEVELOPED INDEX OF 50 OR LESS.
    B. INSULATION INSTALLED OUTDOORS SHALL HAVE A FLAME-SPREAD INDEX OF 75 OR LESS, AND SMOKE-DEVELOPED INDEX OF 150 OR LESS.

PART 2 - PRODUCTS
1. INTERIOR DUCTWORK SHALL HAVE FLEXIBLE FIBERGLASS DUCT WRAP LAMINATED TO FOIL REINFORCED KRAFT VAPOR BARRIER FACING WITH 2" STAPLING FLANGE AND AN INSTALLED THICKNESS OF 1-1/2" WITH AN R-VALUE OF 6.0.
2. EXTERIOR DUCTWORK SHALL BE INSULATED WITH 2" THICK RIGID INSULATION WITH A MINIMUM R-VALUE OF 12.0, PROTECTED WITH ROOFING MEMBRANE.

PART 3 - EXECUTION
1. PREPARATION: CLEAN AND DRY SURFACES. REMOVE MATERIALS THAT WILL ADVERSELY AFFECT INSULATION APPLICATION.
2. GENERAL INSTALLATION REQUIREMENTS:
    A. INSTALL INSULATION ACCORDING TO MANUFACTURER'S INSTALLATION INSTRUCTIONS.
    B. INSTALL INSULATION AND ACCESSORIES AND FINISHES WITH SMOOTH, STRAIGHT AND EVEN SURFACES; FREE OF VOIDS THROUGHOUT THE LENGTH OF DUCT AND FITTINGS.
    C. INSTALL ACCESSORIES COMPATIBLE WITH INSULATION MATERIALS AND SUITABLE FOR THE SERVICE. ACCESSORIES SHALL NOT CORRODE, SOFTEN OR OTHERWISE ATTACK INSULATION OR JACKET IN EITHER WET OR DRY STATE.
    D. INSTALL INSULATION WITH LONGITUDINAL SEAMS AT TOP OF HORIZONTAL RUNS. LONGITUDINAL SEAMS AND END JOINTS SHALL BE TIGHT. BOND SEAMS AND JOINTS WITH ADHESIVE RECOMMENDED BY INSULATION MANUFACTURER TO MAINTAIN VAPOR BARRIER INTEGRITY.
    E. APPLY ADHESIVES, MASTICS AND SEALANTS AT MANUFACTURER'S RECOMMENDED COVERAGE RATE.
    F. CUT INSULATION IN A MANNER TO AVOID COMPRESSING INSULATION MORE THAN 75 PERCENT ITS NOMINAL THICKNESS.
3. PENETRATIONS
    A. ROOF PENETRATIONS: INSTALL INSULATION CONTINUOUSLY THROUGH ROOF PENETRATIONS. FOR APPLICATIONS REQUIRING ONLY INDOOR INSULATION, TERMINATE INSULATION ABOVE ROOF SURFACE AND SEAL WITH JOINT SEALANT. FOR APPLICATIONS REQUIRING INDOOR AND OUTDOOR INSULATION, INSTALL INSULATION FOR OUTDOOR APPLICATIONS TIGHTLY JOINED TO INDOOR INSULATION ENDS. SEAL JOINT WITH JOINT SEALANT.
    B. WALL PENETRATIONS: INSTALL INSULATION CONTINUOUSLY THROUGH WALL PENETRATIONS. FOR APPLICATIONS REQUIRING ONLY INDOOR INSULATION, TERMINATE INSULATION ABOVE ROOF SURFACE AND SEAL WITH JOINT SEALANT. FOR APPLICATIONS REQUIRING INDOOR AND OUTDOOR INSULATION, INSTALL INSULATION FOR OUTDOOR APPLICATIONS TIGHTLY JOINED TO INDOOR INSULATION ENDS. SEAL JOINT WITH JOINT SEALANT.
    C. INTERIOR WALLS: INSTALL INSULATION CONTINUOUSLY THROUGH WALLS AND PARTITIONS THAT ARE NOT FIRE RATED. TERMINATE INSULATION AT FIRE DAMPER SLEEVES FOR FIRE-RATED WALL AND PARTITION PENETRATIONS. EXTERNALLY INSULATE THE DAMPER SLEEVES TO MATCH ADJACENT INSULATION AND OVERLAP DUCT INSULATION AT LEAST 2 INCHES.

(END OF SECTION 23 07 13)

HVAC GENERAL NOTES

A GENERAL NOTES APPLY TO ALL HVAC SHEETS.

B WORK SHALL COMPLY WITH STATE AND LOCAL CODE REQUIREMENTS AS APPROVED AND AMENDED BY THE AUTHORITY HAVING JURISDICTION, INCLUDING APPLICABLE SECTIONS OF NFPA, THE MECHANICAL CODE, AND ANY INTERIM AMENDMENTS AT THE TIME OF THE PROPOSAL. PURCHASE PERMITS ASSOCIATED WITH THE WORK. OBTAIN INSPECTIONS REQUIRED BY CODE. SEE SHEET G-001 FOR THE PREVAILING CODES.

C CONTRACTOR AND SUBCONTRACTORS SHALL REVIEW A COMPLETE SET OF THE CONSTRUCTION DOCUMENTS.

D COORDINATE WORK WITH THE WORK OF OTHER TRADES, EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF THE OWNER, AND OF THE EXISTING CONDITIONS AT THE PROJECT SITE.

E DRAWINGS FOR THE MECHANICAL WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED. THE DRAWING SHALL NOT BE SCALED FOR EXACT MEASUREMENTS, REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS. PROVIDE DUCTWORK, CONNECTIONS, OFFSETS, ACCESSORIES, AND MATERIALS NECESSARY FOR A COMPLETE SYSTEM.

F DUCT DIMENSIONS ON PLANS INDICATE DIMENSIONS OF INTERNAL FREE AREA.

G PERFORATED CEILING DIFFUSERS SHALL BE 4-WAY UNLESS NOTED OTHERWISE.

H COORDINATE ROOF WORK WITH THE LANDLORD AND THE OWNER'S CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION. UTILIZE THE LANDLORD’S ROOFING CONTRACTOR AT THE GENERAL CONTRACTOR’S EXPENSE WHEN REQUIRED.

I UNLESS NOTED OTHERWISE RECTANGULAR DUCT ELBOWS SHALL BE MITERED ELBOWS WITH DOUBLE-THICKNESS TURNING VANES.

J REPLACE AIR FILTERS WITH NEW, CLEAN MERV8 FILTERS AT TURNOVER.

K THE TERM "FURNISH" OR "SUPPLY" MEANS SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS. THE TERM "INSTALL" DESCRIBES THE OPERATIONS AT THE PROJECT SITE INCLUDING THE ACTUAL UNLOADING, UNPACKING, ASSEMBLY, ERECTING, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS. THE TERM "PROVIDE" MEANS TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE.

L A FINAL REPORT FOR THE TESTING AND ADJUSTMENTS OF ALL NEW SYSTEMS FROM ALL DISCIPLINES SHALL BE COMPLETED WITH FINAL APPROVAL BY THE FIELD INSPECTOR. THIS REPORT SHALL BE SIGNED BY THE INDIVIDUAL RESPONSIBLE FOR PERFORMING THESE SERVICES.

M TESTING AND BALANCING OF THE MECHANICAL SYSTEMS TO BE COMPLETED BY NATIONALTAB AT THE GENERAL CONTRACTOR’S EXPENSE. THE CONTRACTOR SHALL CONTRACT WITH, SCHEDULE AND SUPERVISE/ASSIST NATIONALTAB AS REQUIRED. REFER TO THE COVER SHEET, OR CONTACT SWEETGREEN’S CONSTRUCTION MANAGER FOR CONTACT INFORMATION.

N ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, OR SHEET METAL UNTIL THE FINAL START UP OF THE HEATING, COOLING, AND VENTILATION EQUIPMENT.

O REFER TO THE TRANE AND CAPTIVE-AIRE NATIONAL ACCOUNT INFORMATION BLOCKS ON SHEET M-300 FOR REPRESENTATIVE CONTACT INFORMATION.

P CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY UNIT CONFIGURATIONS, COORDINATE DELIVERY WITH TRANE, RECEIVE AND UNLOAD EQUIPMENT, INSPECT EQUIPMENT AND PROPERLY INSTALL EQUIPMENT INCLUDING FIELD-INSTALLED ITEMS. PROVIDE EQUIPMENT STARTUP AND 1ST YEAR LABOR WARRANTY AND ADMINISTRATION.

Q UPON INSTALLATION OF DUCTWORK, PERFORM A DUCT LEAKAGE TEST IN ACCORDANCE WITH CMC 603.10.1.

R THIS SCOPE OF WORK SHALL COMPLY WITH AND BE CONSTRUCTED IN ACCORDANCE WITH THE 2019 CALIFORNIA GREEN BUILDING CODE, THE 2019 CALIFORNIA MECHANICAL CODE, THE 2019 CALIFORNIA ENERGY CODE AND PER NFPA 96.

C

SECTION 23 31 13 - METAL DUCTS

PART 1 - GENERAL
1. SECTION INCLUDES
    A. RECTANGULAR DUCTS AND FITTINGS
    B. ROUND DUCTS AND FITTINGS
    C. DOUBLE-WALL DUCTWORK AND FITTINGS
    D. FLAT-OVAL DUCTS AND FITTINGS
    E. SHEET METAL MATERIALS
    F. SEALANTS AND GASKETS
    G. HANGERS AND SUPPORTS
2. PERFORMANCE REQUIREMENTS
    A. DUCT CONSTRUCTION, INCLUDING SHEET METAL THICKNESS, SEAM AND JOINT CONSTRUCTION, REINFORCEMENTS AND HANGERS/SUPPORTS SHALL COMPLY WITH THE LATEST VERSION OF SMACNA'S “HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE.”
    B. DUCT HANGERS AND SUPPORTS SHALL WITHSTAND THE EFFECTS OF GRAVITY LOADS AND STRESSES WITHIN LIMITS UNDER CONDITIONS DESCRIBED IN SMACNA'S “HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE.”
    C. SURFACES IN CONTACT WITH THE AIRSTREAM SHALL COMPLY WITH REQUIREMENTS IN ANSI/ASHRAE 62.1.
3. SECTION REQUIREMENTS
    A. SUBMITTALS: NONE REQUIRED.

PART 2 - PRODUCTS
1. RECTANGULAR DUCTS AND FITTINGS:
    A. COMPLY WITH SMACNA'S “HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE” BASED ON INDICATED STATIC-PRESSURE CLASS UNLESS NOTED OTHERWISE.
    B. TRAVERSE JOINTS: SELECT JOINT TYPES AND FABRICATE ACCORDING TO SMACNA'S “HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE,” FIGURE 2-1 FOR STATIC-PRESSURE CLASS, APPLICABLE SEALING REQUIREMENTS, MATERIALS INVOLVED, DUCT SUPPORT INTERVALS AND OTHER PROVISIONS AS REQUIRED.
    C. LONGITUDINAL SEAMS: SELECT SEAM TYPES AND FABRICATE ACCORDING TO SMACNA'S “HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE,” FIGURE 2-2 FOR STATIC-PRESSURE CLASS, APPLICABLE SEALING REQUIREMENTS, MATERIALS INVOLVED, DUCT SUPPORT INTERVALS AND OTHER PROVISIONS AS REQUIRED.
    D. ELBOWS, TRANSITIONS OFFSETS, BRANCH CONNECTIONS AND OTHER DUCT CONSTRUCTION: SELECT TYPES AND FABRICATE ACCORDING TO SMACNA'S “HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE,” CHAPTER 4 FOR STATIC-PRESSURE CLASS, APPLICABLE SEALING REQUIREMENTS, MATERIALS INVOLVED, DUCT SUPPORT INTERVALS AND OTHER PROVISIONS AS REQUIRED.
2. ROUND DUCTS AND FITTINGS:
    A. SPIRAL LOCK SEAM, WITHOUT INSULATION.
    B. BASIS OF DESIGN: LINDAB SAFE SINGLE WALL DUCTS AND FITTINGS. ALTERNATES BY MCGILL AIRFLOW. ALL DUCTWORK SHALL BE PREPPED AND READY TO RECEIVE PAINT.
3. FLAT-OVAL DUCTS AND FITTINGS
    A. SPIRAL LOCK SEAM, WITHOUT INSULATION.
    B. BASIS OF DESIGN: LINDAB FOSR FLAT-OVAL SPIRAL DUCTS AND FITTINGS. ALTERNATES BY MCGILL AIRFLOW. ALL DUCTWORK SHALL BE PREPPED AND READY TO RECEIVE PAINT.
4. DOUBLE-WALL DUCTWORK AND FITTINGS
    A. SPIRAL LOCK SEAM, WITH 1" INSULATION THICKNESS.
    B. BASIS OF DESIGN: LINDAB SAFE DOUBLE WALL DUCTS AND FITTINGS. ALTERNATES BY MCGILL AIRFLOW.
4. MATERIALS: GALVANIZED SHEET STEEL. COMPLY WITH ASTM A 653/A 653M. G90 COATING DESIGNATION.
5. SEALANTS AND GASKETS:
    A. MAXIMUM FLAME-SPREAD INDEX: 25 (WHEN TESTED ACCORDING TO UL 723).
    B. MAXIMUM SMOKE-DEVELOPED INDEX: 50 (WHEN TESTED ACCORDING TO UL 723).
    C. TWO-PART TAPE SEALING SYSTEM: PROVIDE 3” TAPE CONSTRUCTED OF WOVEN COTTON FIBER IMPREGNATED WITH MINERAL GYPSUM AND MODIFIED ACRYLIC/SILICONE TO FORM A HARD, DURABLE AIRTIGHT SEAL. SEALANT SHALL BE A MODIFIED STYRENE ACRYLIC. COMPATIBLE WITH GALVANIZED SHEET STEEL. WATER, MOLD AND MILDEW RESISTANT. VOC CONTENT OF 250g/L OR LESS.
    D. WATER BASED JOINT AND SEAM SEALANT: BRUSH ON WITH MINIMUM OF 65% SOLIDS CONTENT. MINIMUM SHORE A HARDNESS OF 20. COMPATIBLE WITH GALVANIZED SHEET STEEL. WATER, MOLD AND MILDEW RESISTANT. VOC CONTENT OF 75g/L (LESS WATER).
6. HANGERS AND SUPPORT:
    A. RECTANGULAR DUCTWORK: HANGER RODS SHALL BE CADMIUM-PLATED STEEL RODS AND NUTS. STRAP AND ROD SIZE SHALL COMPLY WITH SMACNA'S “HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE,” TABLE 5-1. SECURE TO DUCT WITH SHEET METAL SCREWS COMPATIBLE WITH DUCT MATERIALS.
    B. ROUND DUCTWORK: SUPPORT WITH AIRCRAFT CABLE COMPLYING WITH ASTM A 603. CONNECT ENDS WITH CADMIUM-PLATED STEEL ASSEMBLIES WITH BRACKETS, SWIVEL AND BOLTS DESIGNED FOR DUCT HANGER SERVICE.
    C. EXTERIOR DUCTWORK SHALL BE PROVIDED WITH DUCT SUPPORTS, SPACED PER THE MANUFACTURER'S RECOMMENDATIONS.

PART 3 - EXECUTION
1. INSTALLATION
    A. DRAWING PLANS, SCHEMATICS AND DIAGRAMS INDICATE GENERAL LOCATION AND ARRANGEMENT OF DUCTWORK ROUTING. COORDINATE INSTALLATION WITH WORK OF ALL OTHER TRADES AND EXISTING CONDITIONS. ACCOMMODATE DUCT HANGER, RODS, INSULATION AND OTHER REQUIREMENTS AS REQUIRED.
    B. INSTALL DUCTS ACCORDING TO SMACNA'S “HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE” IN MAXIMUM PRACTICAL LENGTHS WITH FEWEST POSSIBLE JOINTS.
    C. UNLESS NOTED OTHERWISE, INSTALL DUCTS PARALLEL AND PERPENDICULAR TO BUILDING LINES.
    D. INSTALL DUCTS WITH CLEARANCES AS REQUIRED TO ACCOMMODATE THE INSTALLATION OF INSULATION.
    E. INSTALLATION OF EXPOSED DUCTWORK: PROTECT DUCTWORK FROM DAMAGE. REPAIR/REPLACE ALL DAMAGED SECTIONS AND FINISHED WORK. TRIM SEALANTS FLUSH WITH METAL. CREATE A SMOOTH AND UNIFORM EXPOSED BEAD. DO NOT USE TWO-PART TAPING SYSTEM. MAINTAIN CONSISTENCY, SYMMETRY AND UNIFORMITY IN THE INSTALLATION.
2. DUCT SEALING: CONSTRUCT DUCTS WITH 2 INCH POSITIVE AND NEGATIVE DUCT PRESSURE CLASSIFICATIONS.
3. HANGER AND SUPPORT INSTALLATION: COMPLY WITH SMACNA'S “HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE,” CHAPTER 5. HANGERS EXPOSED TO VIEW SHALL BE AIRCRAFT IN ACCORDANCE WITH THE MECHANICAL DETAILS.
4. CONNECTIONS: MAKE CONNECTIONS TO EQUIPMENT WITH FLEXIBLE CONNECTORS COMPLYING WITH SECTION 23 33 00 “AIR DUCT ACCESSORIES.” COMPLY WITH SMACNA'S “HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE” FOR BRANCH, OUTLET AND INLET, AND TERMINAL UNIT CONNECTIONS.
5. CLEANING: CLEAN ALL EXISTING DUCTWORK TO REMAIN PRIOR TO TESTING, ADJUSTING AND BALANCING. REMOVE ALL SURFACE CONTAMINANTS AND DEPOSITS ON AIR OUTLETS AND INLETS PRIOR TO PUNCH.
6. PROVIDE AIR BALANCE IN ACCORDANCE WITH SECTION 23 05 93 “TESTING, ADJUSTING, AND BALANCING FOR HVAC.”
7. DUCT ELBOWS
    A. RECTANGULAR: PROVIDE HOLLOW-FORMED, DOUBLE-THICKNESS TURNING VANES OR RADIUSED ELBOWS WITH INSIDE RADIUS NO SMALLER THAN 1/2 OF THE DUCT WIDTH.
    B. ROUND DUCT ELBOWS: PROVIDE RADIUSED ELBOWS WITH AN INSIDE RADIUS NO SMALLER THAN 1/2 OF THE DUCT WIDTH.
8. BRANCH CONFIGURATION
    A. RECTANGULAR: COMPLY WITH SMACNA'S “HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE,” FIGURE 4-6. RECTANGULAR MAIN TO RECTANGULAR BRANCH SHALL BE A 45-DEGREE ENTRY. RECTANGULAR MAIN TO ROUND BRANCH SHALL BE A SPIN-IN FITTING.
    B. ROUND: COMPLY WITH SMACNA'S “HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE,” FIGURE 3-5 AND FIGURE 3-6. PROVIDE 90 DEGREE TAP.

(END OF SECTION 23 31 13)

SECTION 23 33 00 - AIR DUCT ACCESSORIES

PART 1 - GENERAL
1. SECTION INCLUDES
    A. BACKDRAFT AND PRESSURE RELIEF DAMPERS
    B. MANUAL VOLUME DAMPERS
    C. TURNING VANES
    D. FLEXIBLE CONNECTORS
    E. DUCT ACCESSORY HARDWARE
2. SECTION REQUIREMENTS
    A. SUBMITTALS: NONE REQUIRED.

PART 2 - PRODUCTS
1. COMPLY WITH NFPA 90A AND WITH NFPA 90B.
2. COMPLY WITH SMACNA'S “HVAC DUCT CONSTRUCTION STANDARDS-METAL AND FLEXIBLE” FOR ACCEPTABLE MATERIALS, THICKNESS AND DUCT CONSTRUCTION METHODS UNLESS NOTED OTHERWISE. SHEET METAL MATERIALS SHALL BE FREE FROM PITTING, SEAM MARKS, ROLLER MARKS, STAINS, DISCOLORATIONS AND OTHER IMPERFECTIONS.
3. GALVANIZED SHEET STEEL: COMPLY WITH ASTM A 653/A 653M. G90 COATING DESIGNATION.
4. MANUAL VOLUME DAMPERS: STANDARD LEAKAGE RATING WITH LINKAGE OUTSIDE OF AIRFRAME. SUITABLE FOR HORIZONTAL OR VERTICAL APPLICATIONS
    A. FRAME: HAT SHAPED WITH MITERED AND WELDED CORNERS. FLANGELESS FRAMES FOR INSTALLING IN DUCTS.
    B. BLADES: RECTANGULAR DAMPERS SHALL BE MULTIPLE BLADES WITH OPPOSED-BLADE DESIGN. ROUND DAMPERS SHALL BE SINGLE BLADE.
    C. BLADE AXLES: GALVANIZED STEEL.
    D. BEARINGS: MOLDED SYNTHETIC.
    E. TIE BARS AND BRACKETS: GALVANIZED STEEL.
    F. JACKSHAFT: 1/2" DIAMETER CONSTRUCTED OF GALVANIZED STEEL WITHIN PIPE-BEARING ASSEMBLY WITH SUPPORTS. LENGTH AND NUMBER OF MOUNTINGS AS REQUIRED.
    G. HARDWARE: ZINC-PLATED, DIE CAST CORE WITH DIAL HANDLE AND A LOCKING NUT.
5. TURNING VANES: CURVED BLADES OF GALVANIZED SHEET STEEL. PROVIDED WITH SUPPORT BARS PERPENDICULAR TO BLADE SET SUITABLE FOR DUCT MOUNTING. COMPLY WITH SMACNA'S “HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE." SINGLE WALL CONSTRUCTION.
6. FLEXIBLE CONNECTORS: CONSTRUCTED OF FLAME-RETARDANT OR NONCOMBUSTIBLE FABRIC. FABRIC SHALL BE A GLASS FABRIC, DOUBLE COATED WITH NEOPRENE. COMPLY WITH UL 181 CLASS 1. FACTORY-FABRICATED WITH A FABRIC STRIP 3-1/2 INCHES WIDE ATTACHED TO TWO STRIPS OF 2-3/4 INCH THICK GALVANIZED SHEET STEEL.

PART 3 - EXECUTION
1. INSTALLATION
    A. INSTALL DUCT ACCESSORIES ACCORDING TO APPLICABLE DETAILS IN SMACNA'S “HVAC DUCT CONSTRUCTION STANDARDS-METAL AND FLEXIBLE.”
    B. INSTALL VOLUME DAMPERS AT POINTS NOTED ON PLANS AND AS REQUIRED FOR SYSTEM BALANCING. WHERE DAMPERS ARE INSTALLED IN DUCTS WITH DUCT LINER, INSTALL DAMPERS WITH HAT CHANNELS OF SAME DEPTH AS LINER AND TERMINATE LINER WITH NOSING AT HAT CHANNEL.
    C. SET DAMPERS TO FULLY OPEN POSITION BEFORE TESTING, ADJUSTING AND BALANCING.
    D. INSTALL TEST HOLES AT FAN INLETS AND OUTLETS AND WHERE REQUIRED FOR TESTING AND BALANCING PURPOSES.
    E. INSTALL FLEXIBLE CONNECTORS TO CONNECT DUCTS TO EQUIPMENT.
2. TESTS AND INSPECTIONS
    A. OPERATE DAMPERS TO VERIFY FULL RANGE OF MOVEMENT.
    B. INSPECT TURNING VANES FOR PROPER AND SECURE INSTALLATION.

(END OF SECTION 23 33 00)

SECTION 23 33 46 - FLEXIBLE DUCTS

PART 1 - GENERAL
1. SECTION REQUIREMENTS
    A. SUBMITTALS: NONE REQUIRED.

PART 2 - PRODUCTS
1. COMPLY WITH NFPA 90A AND NFPA 90B.
2. COMPLY WITH SMACNA'S “HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE” FOR ACCEPTABLE MATERIALS, MATERIAL THICKNESS AND DUCT CONSTRUCTION METHODS UNLESS NOTED OTHERWISE.
3. COMPLY WITH ASTM E 96/E 96M.
4. INSULATED, FLEXIBLE DUCT UL 181, CLASS 1. FACTORY FABRICATED AND INSULATED. PROVIDED WITH INTERIOR LINER, FIBROUS-GLASS INSULATION AND VAPOR-BARRIER FILM.
    A. PRESSURE RATING: 10” W.G. POSITIVE.
    B. MAXIMUM VELOCITY: 4,000 FPM
    C. INSULATION R-VALUE: R6.0
5. FLEXIBLE DUCT CONNECTORS SHALL BE NYLON STRAPS IN SIZES 3 THROUGH 18 INCHES TO SUIT DUCT SIZE.

PART 3 - EXECUTION
1. INSTALLATION
    A. INSTALL FLEXIBLE DUCTS ACCORDING TO APPLICABLE DETAILS IN SMACNA'S “HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE.”
    B. INSTALL IN INDOOR APPLICATIONS ONLY. FLEXIBLE DUCTWORK IS ONLY PERMITTED TO CONNECT TO SUPPLY-AIR GRILLES, REGISTERS AND DIFFUSERS. MAXIMUM LENGTH SHALL BE 60 INCHES.
    C. CONNECT FLEXIBLE DUCTS TO METAL DUCTS WITH DRAW BANDS AND TAPE.
    D. INSTALL DUCTS FULLY EXTENDED.
    E. DO NOT BEND DUCTS ACROSS SHARP CORNERS.
    F. BENDS OF FLEXIBLE DUCTING SHALL NOT EXCEED A MINIMUM OF ONE DUCT DIAMETER.
    G. AVOID CONTACT WITH METAL FIXTURES, WATER LINES, PIPES, ADJACENT DUCTWORK OR CONDUIT.
    H. INSTALL FLEXIBLE DUCTS IN A DIRECT LINE, WITHOUT SAGS, TWISTS OR TURNS.
    I. SUSPEND FLEXIBLE DUCTS WITH BANDS 1-1/2 INCHES WIDE AND SPACED A MAXIMUM OF 48 INCHES APART. PROVIDE ADDITIONAL SUPPORT AT BENDS. DUCTS MAY REST ON CEILING JOISTS OR TRUSS SUPPORTS. SPACING BETWEEN THESE ELEMENTS SHALL NOT EXCEED 48 INCHES.

(END OF SECTION 23 33 46)

SECTION 23 34 02 - POWER VENTILATORS

PART 1 - GENERAL
1. SECTION REQUIREMENTS
    A. SUBMITTALS: PROVIDE SHOP DRAWINGS INDICATING THE DIMENSIONS, WEIGHTS, REQUIRED CLEARANCES, COMPONENTS, ELECTRICAL CHARACTERISTICS, CFM, STATIC PRESSURE AND FAN CURVE.
    B. WARRANTY: SUBMIT A WRITTEN WARRANTY, SIGNED BY THE MANUFACTURER AGREEING TO REPAIR OR REPLACE COMPONENTS OF RTUS THAT FAIL IN MATERIALS OR WORKMANSHIP WITHIN THE MANUFACTURER'S STANDARD WARRANTY PERIOD.

PART 2 - PRODUCTS
1. DESCRIPTION
    A. CENTRIFUGAL ROOF EXHAUSTER. UPBLAST OR DOWNBLAST.
2. MANUFACTURERS: AS NOTED IN THE MECHANICAL SCHEDULES. NO SUBSTITUTIONS SHALL BE PERMITTED.
3. CHARACTERISTICS. PROVIDED WITH:
    A. CURB: CONSTRUCTED OF GALVANIZED STEEL WITH FULLY WELDED CORNERS AND AS NOTED IN THE MECHANICAL SCHEDULES.
    B. FAN: CONSTRUCTED OF SPUN ALUMINUM AND GALVANIZED STEEL, CENTRIFUGAL AND DIRECT DRIVE. FAN SHALL BEAR A PERMANENTLY ATTACHED NAMEPLATE DISPLAYING THE MODEL AND SERIAL NUMBER OF THE UNIT.
    C. HOUSING: THE BASE SHALL BE CONSTRUCTED OF GALVANIZED STEEL WITH WELDED CORNERS AND SUPPORT FOR HINGING AND CLEANING AND TO PREVENT LEAKAGE INTO THE BUILDING. FAN WINDBAND SHALL BE CONSTRUCTED OF HEAVY GAUGE ALUMINUM OR GALVANIZED STEEL, SECURELY FASTENED TO THE WINDBAND WITH HORIZONTAL AND VERTICAL SUPPORTS .
    D. WHEEL: CENTRIFUGAL, BACKWARD-INCLINED AND NON-OVERLOADING.,WHEEL SHALL BE BALANCED IN TWO PLANES AND COMPLETED IN ACCORDANCE WITH AMCA STANDARD 204-96. WHEEL BLADES SHALL BE DESIGNED TO MINIMIZE TURBULANCE AND REDUCE NOISE. BLADES SHALL BE WELDED TO THE WHEEL INLET CONE. BALANCING WEIGHTS SHALL BE RIVETED TO THE BLADES OR WHEEL. WHEEL SHALL BE ATTACHED TO THE MOTOR SHAFT WITH TWO SET SCREWS.
    E. MOTOR: 120 VOLT, PERMANENTLY LUBRICATED, RATED FOR CONTINUOUS DUTY, THERMALLY PROTECTED AND MOUNTED OUTSIDE THE AIRSTREAM. MOTOR MOUNTING PLATE SHALL BE CONSTRUCTED OF HEAVY GAUGE GALVANIZED STEEL. THE MOTOR COMPARTMENT SHALL BE COOLED BY OUTSIDE AIR. THE MOTOR COMPARTMENT SHALL BE OF A TWO-PIECE CONSTRUCTION WITH THE CAP HAVING QUICK RELEASE CLIPS.
    F. ACCESSORIES: AS NOTED ON THE MECHANICAL SCHEDULES.

PART 3 - EXECUTION
1. INSTALLATION
    A. ROOF CURB: INSTALL ON ROOF STRUCTURE, LEVEL, SECURE, PER STRUCTURAL DETAILS AND PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
    B. UNIT SUPPORT: INSTALL UNIT LEVEL ON STRUCTURAL CURBS PER STRUCTURAL DETAILS AND PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. CONNECTIONS
    A. COMPLY WITH DUCT INSTALLATION REQUIREMENTS SPECIFIED IN OTHER HVAC SECTIONS. DRAWINGS INDICATE GENERAL ARRANGEMENTS OF DUCTS.
    B. INSTALL DUCTS TO TERMINATION TO TOP OF ROOF CURB. REMOVE ROOF DECKING ONLY AS REQUIRED FOR PASSAGE OF DUCTS. DO NOT CUT OUT DECKING UNDER ENTIRE ROOF CURB. CONNECT TO FANS WITH FLEXIBLE DUCT CONNECTORS.
    C. WHERE INSTALLING PIPING ADJACENT TO FANS, ALLOW SPACE FOR SERVICE AND MAINTENANCE.
    D. CONNECT ELECTRICAL WIRING IN ACCORDANCE WITH THE ELECTRICAL SPECIFICATIONS.
    E. GROUND EQUIPMENT IN ACCORDANCE WITH THE ELECTRICAL SPECIFICATIONS.
3. FIELD QUALITY CONTROL
    A. AFTER INSTALLING FANS, TEST UNITS FOR COMPLIANCE WITH REQUIREMENTS.
    B. INSPECT OR AND REMOVE SHIPPING BOLTS, BLOCKS AND TIE-DOWN STRAPS.
    C. CONFIRM PROPER MOTOR ROTATION AND UNIT OPERATIONS.
    D. TEST AND ADJUST CONTROLS AND SAFETIES. REPLACE DAMAGED AND MALFUNCTIONING CONTROLS AND EQUIPMENT.
    E. OPERATIONAL TEST: AFTER ELECTRICAL CIRCUITRY HAS BEEN ENERGIZED, START UNITS TO CONFIRM PROPER MOTOR ROTATION AND UNIT OPERATION.

(END OF SECTION 23 34 02)

SECTION 23 34 33 - AIR CURTAINS

PART 1 - GENERAL
1. SECTION REQUIREMENTS
    A. SUBMITTALS: PROVIDE SHOP DRAWINGS INDICATING THE HEATING WATTAGE, ELECTRICAL CHARACTERISTICS, AIRFLOW CHARACTERISTICS, DIMENSIONS, WEIGHTS AND ACCESSORIES.
    B. WARRANTY: PROVIDE MANUFACTURER'S WARRANTY EFFECTIVE FOR FIVE YEARS FOR UNHEATED UNITS, AND TWO YEARS FOR HEATED UNITS. THE GENERAL CONTRACTOR SHALL PROVIDE A 12 MONTH WARRANTY ON ALL WORKMANSHIP.

PART 2 - PRODUCTS
1. MANUFACTURERS: AS NOTED IN THE MECHANICAL SCHEDULES.
2. CHARACTERISTICS. PROVIDED WITH:
    A. CABINET: ALUMINIZED STEEL CABINET WITH STAINLESS STEEL RIVETED CONSTRUCTION AND WHITE POWDER COATED FINISH.
    B. MOUNTING: PROVIDE WALL OR SUSPENDED MOUNTING AS NOTED ON THE PLANS.
    C. SERVICE ACCESS: REMOVABLE SCREEN AND REMOVABLE BOTTOM ACCESS PANEL.
    D. MOTORS: 1/5 HP, DIRECT DRIVE, RESILIENT MOUNTED, RATED FOR CONTINUOUS DUTY WITH INTERNAL THERMAL-OVERLOAD PROTECTION AND PERMANENTLY LUBRICATED SEALED BALL BEARINGS.
    E. FANS: BALANCED, FORWARD CURVED CROSS FLOW MADE OF ALUMINUM.
    F. DISCHARGE NOZZLES: PROVIDE UNIFORM VELOCITY ACROSS WIDTH OF AIR CURTAIN.
    G. INLET: PROVIDED WITH PERFORATED PATTERN SCREEN.
    H. HEATING ELEMENTS (WHEN NOTED ON PLANS): UL-APPROVED, FACTORY-MOUNTED, FACTORY WIRED, THERMALLY PROTECTED, IN GALVANIZED STEEL FRAME. HELICAL COIL DESIGN WITH THERMAL CUTOUT.
    I. PROVIDE ALL ACCESSORIES AS NOTED IN THE SCHEDULES.
3. CONTROLS:
    A. MANUAL SWITCH: FACTORY INSTALLED “FAN-OFF-FAN & HEAT” AND “HIGH-LOW” SWITCHES.
    B. CONTROL PACKAGE: AIR CURTAIN SHALL TURN ON WHEN DOOR IS OPENED AND SHUT OFF WHEN DOOR IS CLOSED.

PART 3 - EXECUTION
1. INSTALLATION
    A. INSTALL AIR CURTAIN WHERE INDICATED ON DRAWINGS IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS. PROVIDE CLEARANCE TO PERMIT SERVICING AND MAINTENANCE.
    B. INSTALL LEVEL, PLUMB AND AS CLOSE AS PRACTICAL TO TOP OF OPENING AND FACE OF WALL.
    C. INSTALL ALL ACCESSORIES.
2. CONNECTIONS
    A. CONNECT ELECTRICAL WIRING IN ACCORDANCE WITH THE ELECTRICAL SPECIFICATIONS.
    B. GROUND EQUIPMENT IN ACCORDANCE WITH THE ELECTRICAL SPECIFICATIONS.
3. FIELD QUALITY AND CONTROL
    A. TEST AND OPERATE AIR CURTAIN TO VERIFY PERFORMANCE AS INDICATED.
4. ADJUSTING
    A. ADJUST MOTOR AND FAN SPEED TO PERFORM AS INDICATED.
    B. ADJUST NOZZLES TO DEFLECT AIR OUTWARD UNLESS NOTED OTHERWISE.

(END OF SECTION 23 34 33)

SECTION 23 37 13 - GRILLES, REGISTERS & DIFFUSERS

PART 1 - GENERAL
1. SECTION REQUIREMENTS
    A. SUBMITTALS: NONE REQUIRED.

PART 2 - PRODUCTS
1. GRILLES: MANUFACTURER, MODEL, MATERIAL, FINISH, MOUNTING AND ACCESSORIES SHALL BE AS NOTED IN THE MECHANICAL SCHEDULES. NO SUBSTITUTIONS SHALL BE PERMITTED.
2. REGISTERS: MANUFACTURER, MODEL, MATERIAL, FINISH, MOUNTING AND ACCESSORIES SHALL BE AS NOTED IN THE MECHANICAL SCHEDULES. NO SUBSTITUTIONS SHALL BE PERMITTED.
3. DIFFUSERS: MANUFACTURER, MODEL, MATERIAL, FINISH, MOUNTING AND ACCESSORIES SHALL BE AS NOTED IN THE MECHANICAL SCHEDULES. NO SUBSTITUTIONS SHALL BE PERMITTED.

PART 3 - EXECUTION
1. INSTALLATION
    A. INSTALL GRILLES, REGISTERS & DIFFUSERS LEVEL AND PLUMB.
    B. INSTALL GRILLES, REGISTERS & DIFFUSERS AS INDICATED. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION.
    C. INSTALL GRILLES, REGISTERS & DIFFUSERS WITH AIRTIGHT CONNECTIONS TO DUCTS AND TO ALLOW SERVICE AND MAINTENANCE OF DAMPERS, EXTRACTORS AND OTHER ACCESSORIES.
    D. AFTER INSTALLATION, ADJUST REGISTERS & DIFFUSERS TO AIR PATTERNS (IF NOTED) OR AS DIRECTED BY THE TENANT'S CONSTRUCTION MANAGER PRIOR TO STARTING AIR BALANCING.

(END OF SECTION 23 37 13)

sg

sweetgreen®

3101 W. EXPOSITION BLVD.
LOS ANGELES, CALIFORNIA 90018

ENGINEER OF RECORD:

EVERJ ENGINEERING, INC.
1509 BUCK TRAIL LANE
WORTHINGTON, OH 43085
240-319-0822
www.everjengineering.com

STAMP:

JOSHUA ADAM EVERETT
M 40567

10/05/2022

PROJECT INFORMATION:
4S COMMONS

PROJECT INFORMATION:
10562 CRAFTSMAN WAY
#192
SAN DIEGO, CA 92127

DRAWN BY: JAE
CHECKED BY: MK
PROJECT MANAGER: JAE
SG DESIGN MANAGER: KD
SG CONSTR. MANAGER: KZ
PROJECT NO: 210017
TEMPLATE VERSION: 05/20/2022

REVISIONS

REV.	DATE	DESCRIPTION
C	09/14/2022	CODE COMMENTS

MECHANICAL SPECIFICATIONS

M-010

10/5/2022 10:44:54 AM

STATE OF CALIFORNIA

Mechanical Systems

NRCC-MCH-E (Created 09/2020)
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-E

This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.4, or §141.0(b)2 for alterations.

Project Name:	sweetgreen - 4S Commons	Report Page:	Page 1 of 9
Project Address:	10562 Craftsman Way, #192, San Diego, CA 92127	Date Prepared:	05/27/2022

A. GENERAL INFORMATION

01	Project Location (city)	San Diego	04	Total Conditioned Floor Area	1,958
02	Climate Zone	10	05	Total Unconditioned Floor Area	
03	Occupancy Types Within Project:		06	# of Stories (Habitable Above Grade)	1

☐ Office (B)	☐ Retail (M)	☐ Non-refrigerated Warehouse (S)
☐ Hotel/ Motel Guest Rooms (R-1)	☐ School (E)	☐ Healthcare Facility (I)
☐ High-Rise Residential (R-2/R-3)	☐ Relocatable Class Bldg (E)	☑ Other (Write In): Restaurant

[1] *FOOTNOTES: Climate zone can be determined on the California Energy Commission's website at http://www.energy.ca.gov/maps/renewable/building_climate_zones.html*

B. PROJECT SCOPE

Table Instructions: Include any mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.4, or §141.0(b)2 for alterations.

My project consists of (check all that apply)		
01	02	03
Air System(s)	Wet System Components	Dry System Components
☐ Heating Air System	☐ Water Economizer	☐ Air Economizer
☐ Cooling Air System	☐ Pumps	☐ Electric Resistance Heat
Mechanical Controls	☐ Hydronic System Piping	☐ Fan Systems
☑ Mechanical Controls (existing to remain, altered or new)	☐ Cooling Towers	☑ Ductwork (existing to remain, altered or new)
	☐ Chillers	☑ Ventilation
	☐ Boilers	☐ Zonal Systems/ Terminal Boxes

C. COMPLIANCE RESULTS

Table Instructions: If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

01		02		03		04		05		06		07		08	09
System Summary §110.1, §110.2, §140.4	AND	Pumps §140.4(k)	AND	Fans/ Economizers §140.4(c), §140.4(e)	AND	System Controls §110.2, §120.2, §140.4(f)	AND	Ventilation §120.1	AND	Terminal Box Controls §140.4(d)	AND	Distribution §120.3, §140.4(l)	AND	Cooling Towers §110.2(e)2	**Compliance Results**
(See Table F)		(See Table G)		(See Table H)		(See Table I)		(See Table J)		(See Table K)		(See Table L)		(See Table M)	
	AND		AND		AND	Yes	AND	Yes	AND		AND	Yes	AND		**COMPLIES**
Mandatory Measures Compliance (See Table Q for Details)															**COMPLIES**

STATE OF CALIFORNIA

Mechanical Systems

NRCC-MCH-E (Created 09/2020)
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-MCH-E
Project Name:	sweetgreen - 4S Commons	Report Page:	Page 2 of 9
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D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

Selections made in Table O have been changed by the permit applicant. See Table E. Additional Remarks for permit applicant's explanation.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

This Section Does Not Apply

G. PUMPS

This Section Does Not Apply

H. FAN SYSTEMS & AIR ECONOMIZERS

This Section Does Not Apply

I. SYSTEM CONTROLS

Table Instructions: Complete the following Table to demonstrate compliance with mandatory controls in §110.2 and §120.2 and prescriptive controls in §140.4(f) and (n) or requirements in §141.0(b)2E for altered space conditioning systems.

01	02	03	04	05	06	07	08	09
System Name	System Zoning	Conditioned Floor Area Being Served (ft²)	Thermostats §110.2(b) & (c)[1], §120.2(a) or §141.0(b)2E	Shut-Off Controls §120.2(e)	Isolation Zone Controls §120.2(g)	Demand Response §110.12 and §120.2(b)	Supply Air Temp. Reset §140.4(f)	Window Interlocks per §140.4(n)
RTU-1	single zone	≤ 25,000 ft²	Setback Thermostat	Auto Timeswitch	NA: Single Zone	EMCS	NA: Single Zone	NA: No operable windows
RTU-2	single zone	≤ 25,000 ft²	Setback Thermostat	Auto Timeswitch	NA: Single Zone	EMCS	NA: Single Zone	NA: No operable windows

Table Continued

STATE OF CALIFORNIA

Mechanical Systems

NRCC-MCH-E (Created 09/2020)
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-MCH-E
Project Name:	sweetgreen - 4S Commons	Report Page:	Page 3 of 9
Project Address:	10562 Craftsman Way, #192, San Diego, CA 92127	Date Prepared:	05/27/2022

01	02	03	04	05	06	07	08	09
System Name	System Zoning	Conditioned Floor Area Being Served (ft²)	Thermostats §110.2(b) & (c)[1], §120.2(a) or §141.0(b)2E	Shut-Off Controls §120.2(e)	Isolation Zone Controls §120.2(g)	Demand Response §110.12 and §120.2(b)	Supply Air Temp. Reset §140.4(f)	Window Interlocks per §140.4(n)

[1] *FOOTNOTES: Gravity gas wall heaters, gravity floor heaters, gravity room heaters, non-central electric heaters, fireplaces or decorative gas appliances, wood stoves are not required to have setback thermostats.*

** NOTES: Controls with a * require a note in the space below explaining how compliance is achieved.*

EX: System 1: SA Temp Reset: Exempt because zones compliant with §140.4(d); EXCEPTION 1 to §140.4(f)

J. VENTILATION AND INDOOR AIR QUALITY

Table Instructions: Complete the following Table to demonstrate compliance with mandatory ventilation requirements in §120.1 and §120.2(e)3B for all nonresidential, high-rise residential and hotel/motel occupancies. For alterations, only ventilation systems being altered within the scope of the permit application need to be documented in this table. In lieu of this table, the required outdoor ventilation rates and airflows may be shown on the plans or the calculations can be presented in a spreadsheet.

01	☑	Check the box if the project is showing ventilation calculations on the plans, or attaching the calculations instead of completing this table.
02	☐	Check this box if the project includes Nonresidential or Hotel/Motel spaces
	☐	Check this box if the project includes new or altered high-rise residential dwelling units
03	☐	Check the box if the project is using natural ventilation in any spaces to meet required ventilation rates per §120.1(c)2.

[1] *FOOTNOTES: System CFM should include both mechanical and natural ventilation for the zone/system.*
[2] *Air filtration requirements apply to the following three system types per §120.1(c)1A: space conditioning systems utilizing ducts to supply air to occupiable space; supply-only ventilation systems providing outside air to occupiable space; supply side of balanced ventilation systems including heat recovery and energy recovery ventilation systems providing outside air to occupiable space.*
[3] *Uniform Mechanical Code may have more stringent ventilation requirements; the most stringent code requirement takes precedence.*
[4] *See Standards Tables 120.1-A and 120.1-B.*
[5] *For lecture halls with fixed seating, the expected number of occupants shall be determined in accordance with the California Building Code.*
[6] *§120.2(e)3 requires systems serving rooms that are required by §130.1(c) to have lighting occupancy sensing controls to also have occupancy sensing zone controls for ventilation. Examples of spaces which require lighting occupancy sensors include offices 250ft² or smaller, multipurpose rooms less than 1,000ft², classrooms, conference rooms, restrooms, aisles and open areas in warehouses, library book stack aisles, corridors, stairwells, parking garages, and loading and unloading zones, unless excepted by §130.1(c).*

K. TERMINAL BOX CONTROLS

This Section Does Not Apply

STATE OF CALIFORNIA

Mechanical Systems

NRCC-MCH-E (Created 09/2020)
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-MCH-E
Project Name:	sweetgreen - 4S Commons	Report Page:	Page 4 of 9
Project Address:	10562 Craftsman Way, #192, San Diego, CA 92127	Date Prepared:	05/27/2022

L. DISTRIBUTION (DUCTWORK AND PIPING)

Table Instructions: Complete the following tables to show compliance with mandatory pipe insulation requirements found in §120.3 and prescriptive requirements found in §140.4(l) for duct leakage testing.

Duct Leakage Sealing

The answers to the questions below apply to the following duct system(s):	All	Duct leakage testing triggered for these systems?	No

11	No	The scope of the project includes only duct systems serving healthcare facilites.	
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.	
13	Yes	The space conditioning system serves less than 5,000 ft² of conditioned floor area.	
14	No	The combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system:	
		☐	Outdoors
		☐	In a space directly under a roof that has a U-factor greater than the U-factor of the ceiling, or if the roof does not meet the requirements of §140.3(a)1B or if the roof has fixed vents or openings to the outside/ unconditioned spaces
		☐	In an unconditioned crawlspace
		☐	In other unconditioned spaces
15	No	The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.	
16	No	The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.	
17		Duct system shall be sealed in accordance with the California Mechanical Code.	

M. COOLING TOWERS

This Section Does Not Apply

N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

YES	NO	Form/Title	Systems To Be Field Verified	Field Inspector	
				Pass	Fail
●		NRCI-MCH-01-E - Must be submitted for all buildings.		☐	☐

---

sg

sweetgreen®

3101 W. EXPOSITION BLVD.
LOS ANGELES, CALIFORNIA 90018

ENGINEER OF RECORD:

EVERJ ENGINEERING, INC.
1509 BUCK TRAIL LANE
WORTHINGTON, OH 43085
240-319-0822
www.everjengineering.com

STAMP:

PROFESSIONAL ENGINEER
JOSHUA ADAM EVERETT
M 40567
MECHANICAL
STATE OF CALIFORNIA

10/05/2022

PROJECT INFORMATION:
4S COMMONS

PROJECT INFORMATION:
10562 CRAFTSMAN WAY
#192
SAN DIEGO, CA 92127

DRAWN BY:	JAE
CHECKED BY:	MK
PROJECT MANAGER:	JAE
SG DESIGN MANAGER:	KD
SG CONSTR. MANAGER:	KZ
PROJECT NO:	210017
TEMPLATE VERSION:	05/20/2022

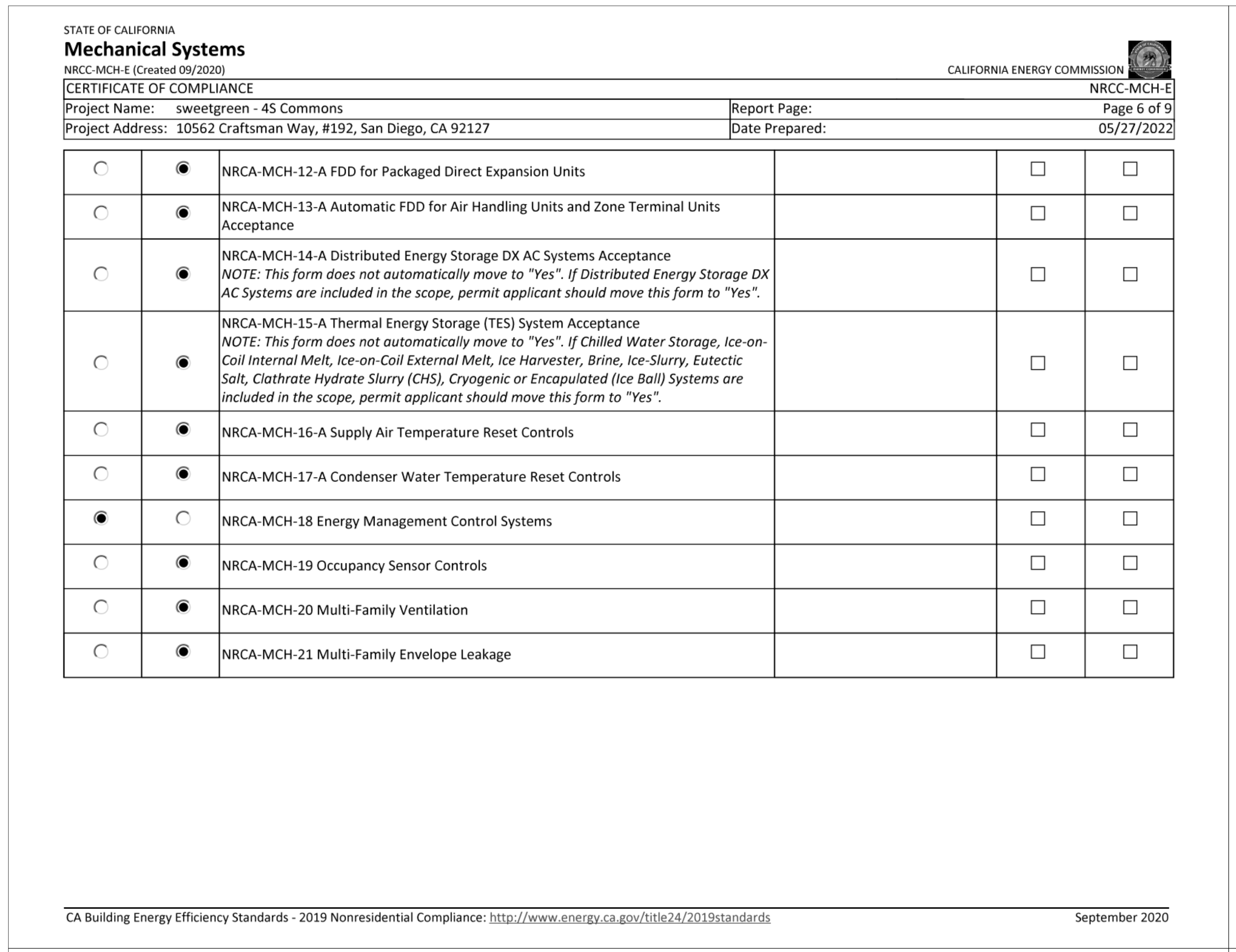
REVISIONS

REV.	DATE	DESCRIPTION

ENERGY COMPLIANCE FORMS

M-020

10/5/2022 10:44:56 AM


STATE OF CALIFORNIA

Mechanical Systems

NRCC-MCH-E (Created 09/2020)

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CERTIFICATE OF COMPLIANCE	NRCC-MCH-E
Project Name: sweetgreen - 4S Commons	Report Page: Page 6 of 9
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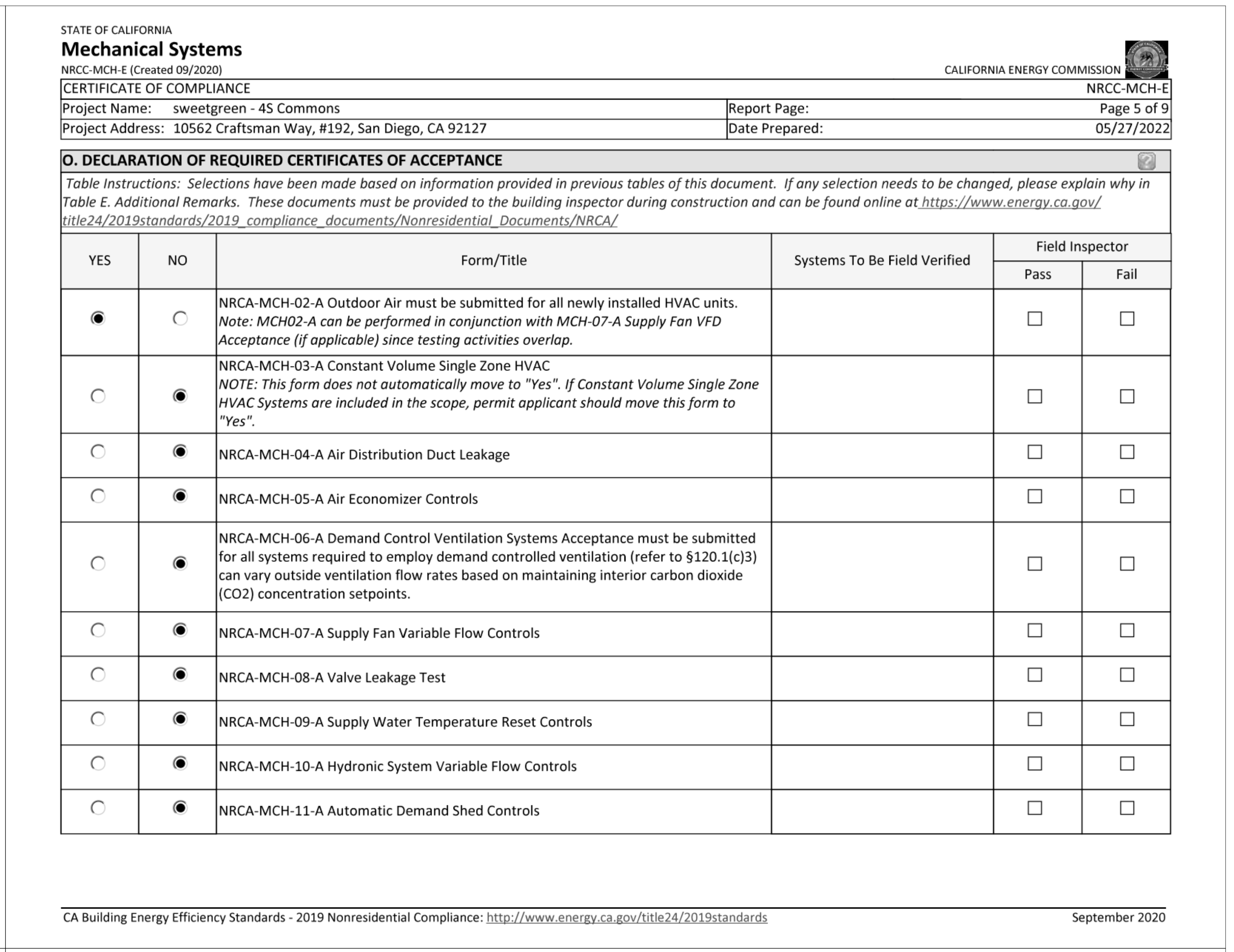
○	●	NRCA-MCH-12-A FDD for Packaged Direct Expansion Units		☐	☐
○	●	NRCA-MCH-13-A Automatic FDD for Air Handling Units and Zone Terminal Units Acceptance		☐	☐
○	●	NRCA-MCH-14-A Distributed Energy Storage DX AC Systems Acceptance *NOTE: This form does not automatically move to "Yes". If Distributed Energy Storage DX AC Systems are included in the scope, permit applicant should move this form to "Yes".*		☐	☐
○	●	NRCA-MCH-15-A Thermal Energy Storage (TES) System Acceptance *NOTE: This form does not automatically move to "Yes". If Chilled Water Storage, Ice-on-Coil Internal Melt, Ice-on-Coil External Melt, Ice Harvester, Brine, Ice-Slurry, Eutectic Salt, Clathrate Hydrate Slurry (CHS), Cryogenic or Encapulated (Ice Ball) Systems are included in the scope, permit applicant should move this form to "Yes".*		☐	☐
○	●	NRCA-MCH-16-A Supply Air Temperature Reset Controls		☐	☐
○	●	NRCA-MCH-17-A Condenser Water Temperature Reset Controls		☐	☐
●	○	NRCA-MCH-18 Energy Management Control Systems		☐	☐
○	●	NRCA-MCH-19 Occupancy Sensor Controls		☐	☐
○	●	NRCA-MCH-20 Multi-Family Ventilation		☐	☐
○	●	NRCA-MCH-21 Multi-Family Envelope Leakage		☐	☐

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: http://www.energy.ca.gov/title24/2019standards September 2020


STATE OF CALIFORNIA

Mechanical Systems

NRCC-MCH-E (Created 09/2020)

CALIFORNIA ENERGY COMMISSION

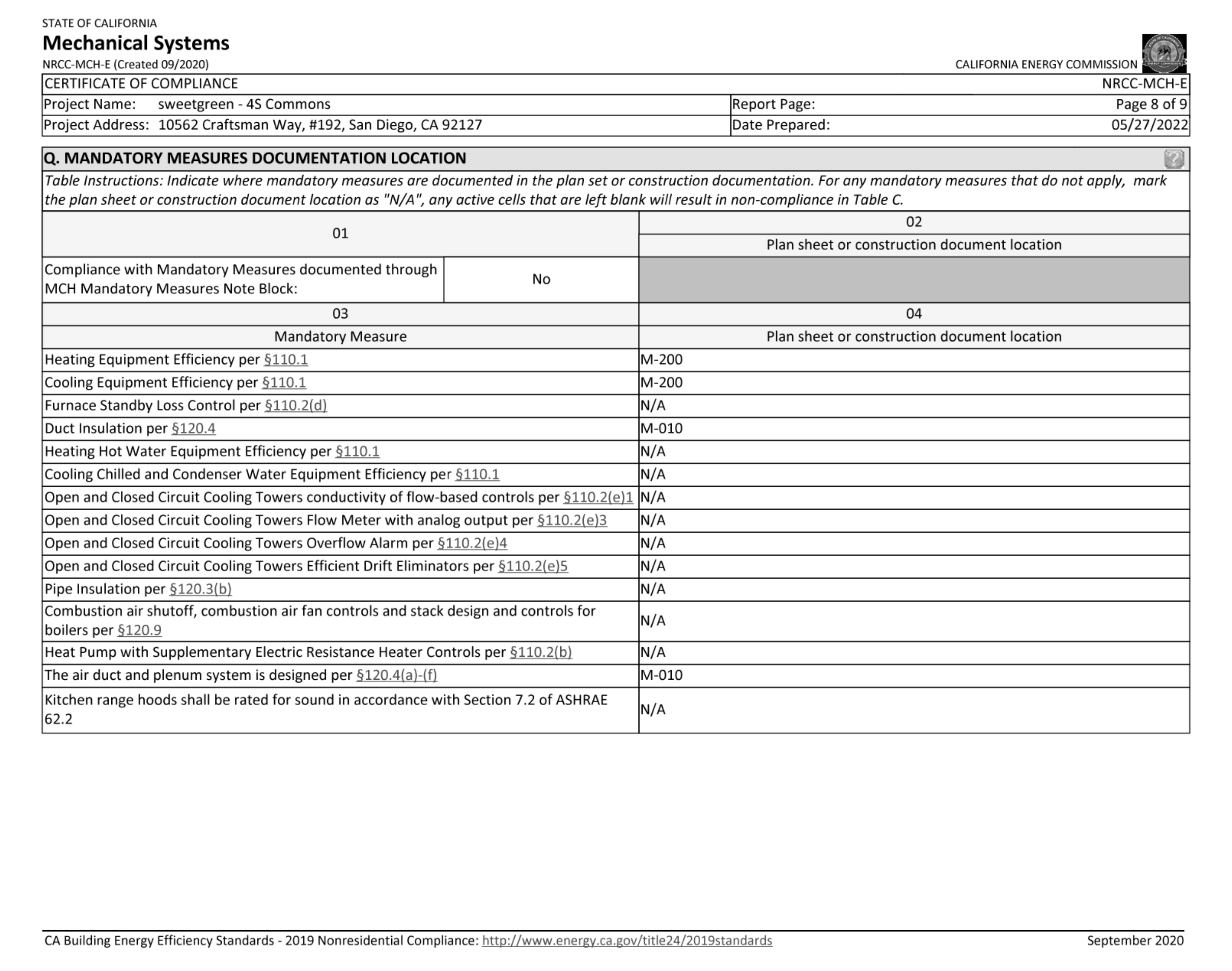
CERTIFICATE OF COMPLIANCE	NRCC-MCH-E
Project Name: sweetgreen - 4S Commons	Report Page: Page 5 of 9
Project Address: 10562 Craftsman Way, #192, San Diego, CA 92127	Date Prepared: 05/27/2022

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

YES	NO	Form/Title	Systems To Be Field Verified	Field Inspector	
				Pass	Fail
●	○	NRCA-MCH-02-A Outdoor Air must be submitted for all newly installed HVAC units. *Note: MCH02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap.*		☐	☐
○	●	NRCA-MCH-03-A Constant Volume Single Zone HVAC *NOTE: This form does not automatically move to "Yes". If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicant should move this form to "Yes".*		☐	☐
○	●	NRCA-MCH-04-A Air Distribution Duct Leakage		☐	☐
○	●	NRCA-MCH-05-A Air Economizer Controls		☐	☐
○	●	NRCA-MCH-06-A Demand Control Ventilation Systems Acceptance must be submitted for all systems required to employ demand controlled ventilation (refer to §120.1(c)3) can vary outside ventilation flow rates based on maintaining interior carbon dioxide (CO2) concentration setpoints.		☐	☐
○	●	NRCA-MCH-07-A Supply Fan Variable Flow Controls		☐	☐
○	●	NRCA-MCH-08-A Valve Leakage Test		☐	☐
○	●	NRCA-MCH-09-A Supply Water Temperature Reset Controls		☐	☐
○	●	NRCA-MCH-10-A Hydronic System Variable Flow Controls		☐	☐
○	●	NRCA-MCH-11-A Automatic Demand Shed Controls		☐	☐

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: http://www.energy.ca.gov/title24/2019standards September 2020


STATE OF CALIFORNIA

Mechanical Systems

NRCC-MCH-E (Created 09/2020)

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-E
Project Name: sweetgreen - 4S Commons	Report Page: Page 8 of 9
Project Address: 10562 Craftsman Way, #192, San Diego, CA 92127	Date Prepared: 05/27/2022

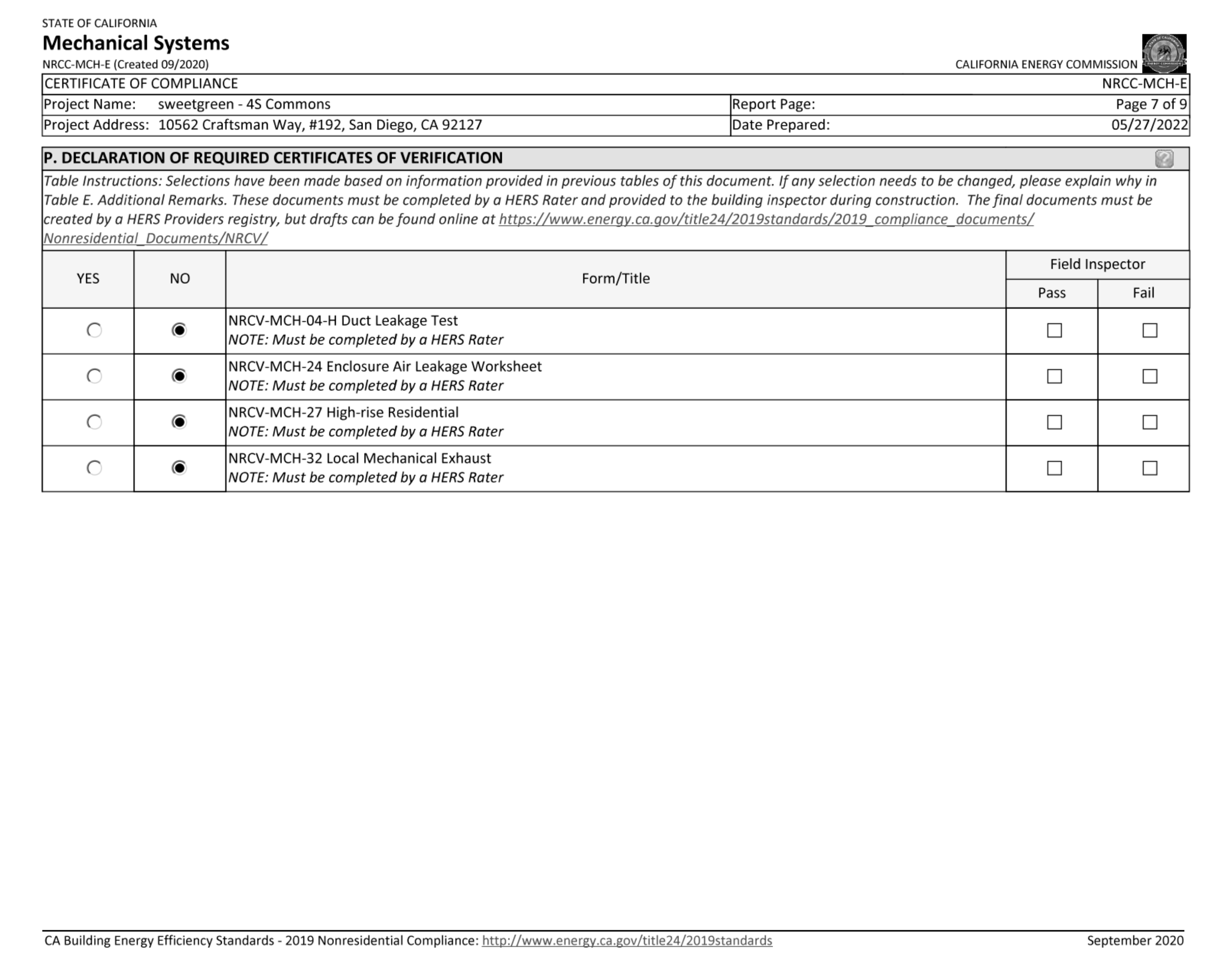
Q. MANDATORY MEASURES DOCUMENTATION LOCATION

Table Instructions: Indicate where mandatory measures are documented in the plan set or construction documentation. For any mandatory measures that do not apply, mark the plan sheet or construction document location as "N/A", any active cells that are left blank will result in non-compliance in Table C.

01		02
		Plan sheet or construction document location
Compliance with Mandatory Measures documented through MCH Mandatory Measures Note Block:	No	

03	04
Mandatory Measure	Plan sheet or construction document location
Heating Equipment Efficiency per §110.1	M-200
Cooling Equipment Efficiency per §110.1	M-200
Furnace Standby Loss Control per §110.2(d)	N/A
Duct Insulation per §120.4	M-010
Heating Hot Water Equipment Efficiency per §110.1	N/A
Cooling Chilled and Condenser Water Equipment Efficiency per §110.1	N/A
Open and Closed Circuit Cooling Towers conductivity of flow-based controls per §110.2(e)1	N/A
Open and Closed Circuit Cooling Towers Flow Meter with analog output per §110.2(e)3	N/A
Open and Closed Circuit Cooling Towers Overflow Alarm per §110.2(e)4	N/A
Open and Closed Circuit Cooling Towers Efficient Drift Eliminators per §110.2(e)5	N/A
Pipe Insulation per §120.3(b)	N/A
Combustion air shutoff, combustion air fan controls and stack design and controls for boilers per §120.9	N/A
Heat Pump with Supplementary Electric Resistance Heater Controls per §110.2(b)	N/A
The air duct and plenum system is designed per §120.4(a)-(f)	M-010
Kitchen range hoods shall be rated for sound in accordance with Section 7.2 of ASHRAE 62.2	N/A

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: http://www.energy.ca.gov/title24/2019standards September 2020


STATE OF CALIFORNIA

Mechanical Systems

NRCC-MCH-E (Created 09/2020)

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-E
Project Name: sweetgreen - 4S Commons	Report Page: Page 7 of 9
Project Address: 10562 Craftsman Way, #192, San Diego, CA 92127	Date Prepared: 05/27/2022

P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be completed by a HERS Rater and provided to the building inspector during construction. The final documents must be created by a HERS Providers registry, but drafts can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCV/

YES	NO	Form/Title	Field Inspector	
			Pass	Fail
○	●	NRCV-MCH-04-H Duct Leakage Test *NOTE: Must be completed by a HERS Rater*	☐	☐
○	●	NRCV-MCH-24 Enclosure Air Leakage Worksheet *NOTE: Must be completed by a HERS Rater*	☐	☐
○	●	NRCV-MCH-27 High-rise Residential *NOTE: Must be completed by a HERS Rater*	☐	☐
○	●	NRCV-MCH-32 Local Mechanical Exhaust *NOTE: Must be completed by a HERS Rater*	☐	☐

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: http://www.energy.ca.gov/title24/2019standards September 2020

sg

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3101 W. EXPOSITION BLVD.
LOS ANGELES, CALIFORNIA 90018

ENGINEER OF RECORD:

EVERJ ENGINEERING, INC.
1509 BUCK TRAIL LANE
WORTHINGTON, OH 43085
240-319-0822
www.everjengineering.com

STAMP:

JOSHUA ADAM EVERETT
M 40567

10/05/2022

PROJECT INFORMATION:
4S COMMONS

PROJECT INFORMATION:
10562 CRAFTSMAN WAY
#192
SAN DIEGO, CA 92127

DRAWN BY:	JAE
CHECKED BY:	MK
PROJECT MANAGER:	JAE
SG DESIGN MANAGER:	KD
SG CONSTR. MANAGER:	KZ
PROJECT NO:	210017
TEMPLATE VERSION:	05/20/2022

REVISIONS

REV.	DATE	DESCRIPTION

ENERGY COMPLIANCE FORMS

M-021

10/5/2022 10:44:58 AM

STATE OF CALIFORNIA

Process Systems

NRCC-PRC-E (Created 01/21)

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-PRC-E

Table Instructions: Include any process systems that are within the scope of the permit application and are demonstrating compliance with mandatory requirements in §120.6, or prescriptive requirements in §140.9. This compliance document is used for newly constructed, addition and alteration projects.

Project Name:	sweetgreen - 4S Commons	Report Page:	Page 1 of 6
Project Address:	10562 Craftsman Way, #192, San Diego, CA 92127	Date Prepared:	05/27/2022

A. GENERAL INFORMATION

01	Project Location (city)	San Diego	04	Total Conditioned Floor Area	1,958
02	Climate Zone	10	05	Total Unconditioned Floor Area	
03	Occupancy Types Within Project:		06	# of Stories (Habitable Above Grade)	1

☐ Office	☐ Retail	☐ Non-refrigerated Warehouse	
☐ Hotel/ Motel	☐ School	☐ Healthcare Facility	
☐ High-Rise Residential	☐ Relocatable Class Bldg	☑ Other (Write In):	Restaurant

B. PROJECT SCOPE

Table Instructions: Include any process systems listed below within the scope of the permit application that are demonstrating compliance with mandatory requirements in §120.6 or prescriptive requirements in §140.9.

My project consists of (check all that apply):

01	02
☐ Refrigerated Spaces <3,000 ft² Total (no Title 24, Pt 6 requirements)	☐ Elevator Lighting & Ventilation Controls (mandatory §120.6(f))
☐ Refrigerated Spaces ≥3,000 ft² Total (mandatory §120.6(a))	☐ Escalator & Moving Walkway Speed Controls (mandatory §120.6(g))
☐ Food Stores > 8,000 ft² cfa (mandatory §120.6(b))	☐ Computer Rooms > 20W/ft² Power Density (prescriptive §140.9(a))[1]
☐ Enclosed Parking Garage Exhaust ≥ 10,000 cfm (mandatory §120.6(c))	☑ Commercial Kitchen Ventilation/Exhaust (prescriptive §140.9(b))[1]
☐ Newly Installed Process Boilers (mandatory §120.6(d))	☐ Laboratory Exhaust/Factory Exhaust & Fume Hood (prescriptive §140.9(c))[1]
☐ Compressed Air Systems Combined HP ≥ 25 (mandatory §120.6(e))	

[1] *FOOTNOTES: These building features can comply using the performance method. If using the performance method for these features, compliance should be demonstrated on the NRCC-PRF-E compliance document.*

C. COMPLIANCE RESULTS

Table Instructions: If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

01	02	03	04	05	06	07	08	09	10	11
Refrigerated Warehouse/ Space §120.6(a)	Commercial Refrigeration §120.6(b)	Parking Garage Exhaust §120.6(c)	Process Boilers §120.6(d)	Compressed Air Systems §120.6(e)	Elevators §120.6(f)	Escalators & Moving Walkways §120.6(g)	Computer Rooms §140.9(a)	Commercial Kitchens §140.9(b)	Laboratory Exhaust §140.9(c)	**Compliance Results**
(See Table F)	(See Table G)	(See Table H)	(See Table I)	(See Table J)	(See Table K)	(See Table L)	(See Table M)	(See Table N)	(See Table O)	
								Yes		**COMPLIES**

STATE OF CALIFORNIA

Process Systems

NRCC-PRC-E (Created 01/21)

CALIFORNIA ENERGY COMMISSION

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Project Name:	sweetgreen - 4S Commons	Report Page:	Page 2 of 6
Project Address:	10562 Craftsman Way, #192, San Diego, CA 92127	Date Prepared:	05/27/2022

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

No exceptional conditions apply to this project.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. REFRIGERATED WAREHOUSE/SPACES

This Section Does Not Apply

G. COMMERCIAL REFRIGERATION

This Section Does Not Apply

H. ENCLOSED PARKING GARAGE EXHAUST

This Section Does Not Apply

I. PROCESS BOILER

This Section Does Not Apply

J. COMPRESSED AIR SYSTEMS

This Section Does Not Apply

K. ELEVATOR LIGHTING AND VENTILATION

This Section Does Not Apply

L. ESCALATORS AND MOVING WALKWAYS SPEED CONTROLS

This Section Does Not Apply

STATE OF CALIFORNIA

Process Systems

NRCC-PRC-E (Created 01/21)

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Project Name:	sweetgreen - 4S Commons	Report Page:	Page 3 of 6
Project Address:	10562 Craftsman Way, #192, San Diego, CA 92127	Date Prepared:	05/27/2022

M. COMPUTER ROOM SYSTEM SUMMARY

This Section Does Not Apply

N. COMMERCIAL KITCHEN EXHAUST AND VENTILATION

Table Instructions: Complete the following table to demonstrate compliance with prescriptive requirements found in §140.9(b). Requirements only apply to new hoods or replacement hoods being installed as part of the permitted scope. Existing hoods not being replaced, or any hoods within a healthcare facility do not need to meet requirements.

Kitchen Ventilation §140.9(b)2

01	☐	Existing kitchen hoods not being replaced as part of an addition or alteration (do not need to meet requirements)
		Requirements
		Replacement Air to Hood Compliance Method §140.9(b)1A
02		Not providing replacement air directly to the hood(s)

	Mechanically cooled or heated makeup air delivered to any space with a kitchen hood is designed per 140.9(b)2A to not exceed the greater of:
03	The hood exhaust flow minus the available transfer air from adjacent spaces.

04	Location that is supplying transfer air:	Kitchen / Dining Areas

05	The kitchen /dining facility has a total Type I and Type II kitchen hood exhaust airflow rate > 5000 cfm and is dign to have one of the following per 140.9(b)2B:
	NA: Not a kitchen /dining facility having a total Type I and Type II kitchen hood exhaust airflow rate > 5,000 cfm

Kitchen Exhaust: Airflow Rate §140.9(b)2

01	Kitchen Name or Tag	Hot Prep	Compliance Method per §140.9(b)1B	NA: Kitchen/ dining facility has a total Type I and Type II hood exhaust rate < 5,000 cfm.		
02	03	04	05	06	07	08
Name or Item Tag	Hood Type[1]	Hood Style	Hood Length (ft)	Equipment Duty	Design Hood Exhaust Rate (CFM)	Max Hood Exhaust Rate Allowed (CFM)
HD-2	Type II				725	

Table Continued

STATE OF CALIFORNIA

Mechanical Systems

NRCC-MCH-E (Created 09/2020)

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-E

Project Name:	sweetgreen - 4S Commons	Report Page:	Page 9 of 9
Project Address:	10562 Craftsman Way, #192, San Diego, CA 92127	Date Prepared:	05/27/2022

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:	Joshua Everett, P.E.	Documentation Author Signature:	
Company:	Everj Engineering, Inc.	Signature Date:	06/22/2022
Address:	1509 Buck Trail Lane	CEA/ HERS Certification Identification (if applicable):	
City/State/Zip:	Worthington/OH/43085	Phone:	240-319-0822

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. **The information provided on this Certificate of Compliance is true and correct.**
2. **I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)**
3. **The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.**
4. **The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.**
5. **I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.**

Responsible Designer Name:	Joshua Everett, P.E.	Responsible Designer Signature:	
Company :	Everj Engineering, Inc.	Date Signed:	06/22/2022
Address:	1509 Buck Trail Lane	License:	40567
City/State/Zip:	Worthington/OH/43085	Phone:	240-319-0822

---

sg

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JOSHUA ADAM EVERETT
M 40567

10/05/2022

PROJECT INFORMATION:
4S COMMONS

PROJECT INFORMATION:
10562 CRAFTSMAN WAY
#192
SAN DIEGO, CA 92127

DRAWN BY: JAE
CHECKED BY: MK
PROJECT MANAGER: JAE
SG DESIGN MANAGER: KD
SG CONSTR. MANAGER: KZ
PROJECT NO: 210017
TEMPLATE VERSION: 05/20/2022

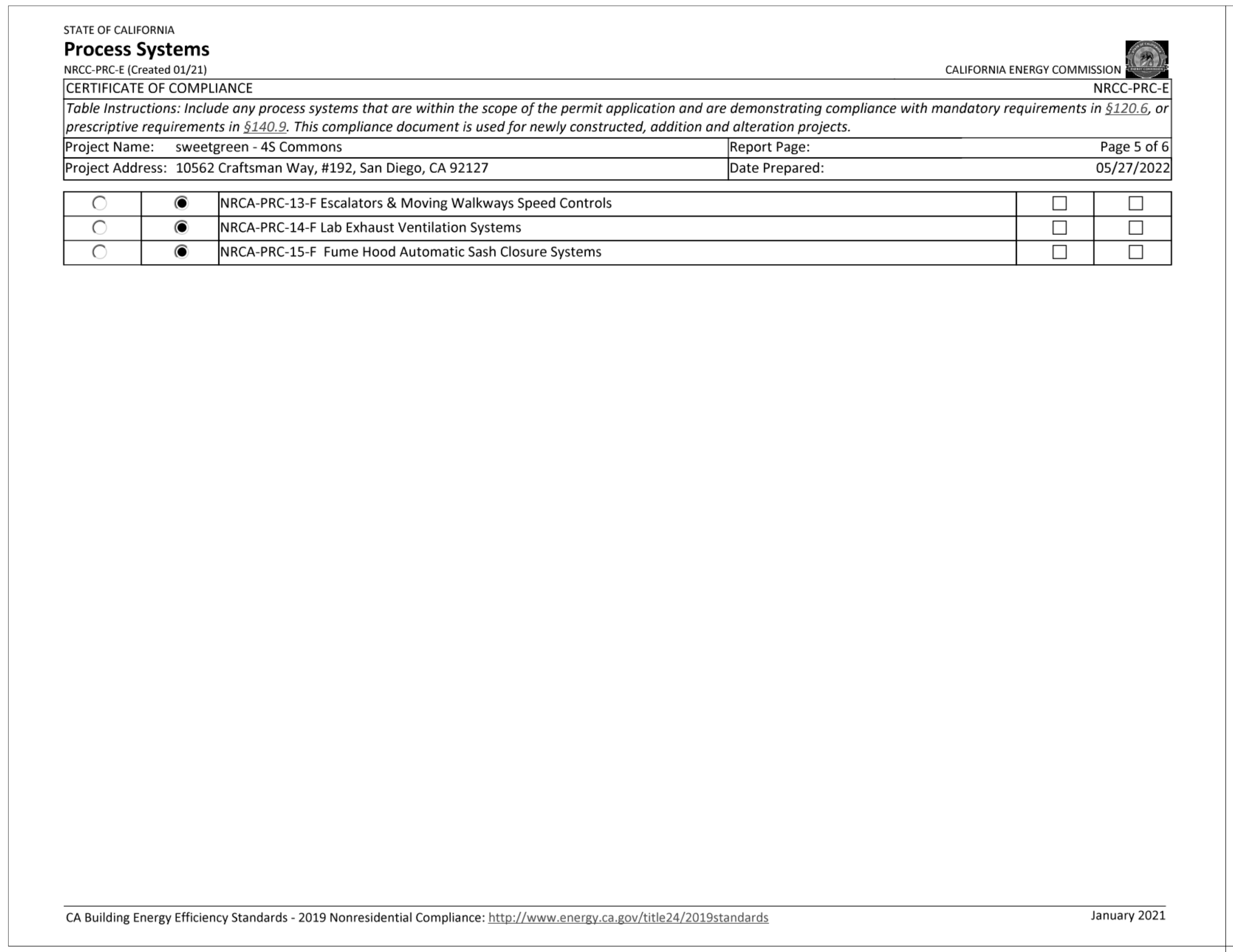
REVISIONS

REV.	DATE	DESCRIPTION

ENERGY COMPLIANCE FORMS

M-022

10/5/2022 10:45:01 AM



STATE OF CALIFORNIA

Process Systems

NRCC-PRC-E (Created 01/21)

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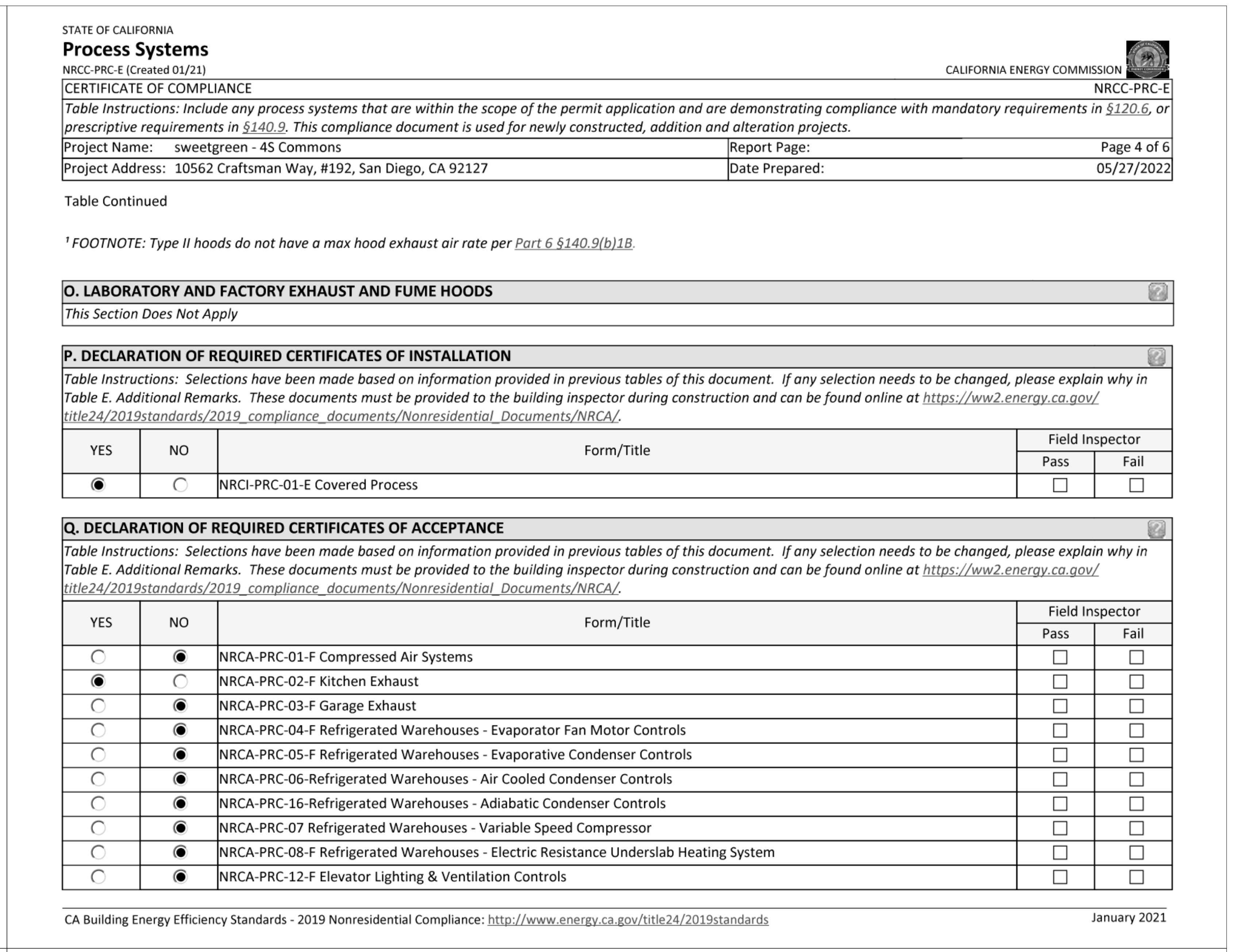
Project Name: sweetgreen - 4S Commons	Report Page: Page 5 of 6
Project Address: 10562 Craftsman Way, #192, San Diego, CA 92127	Date Prepared: 05/27/2022

○	●	NRCA-PRC-13-F Escalators & Moving Walkways Speed Controls	☐	☐
○	●	NRCA-PRC-14-F Lab Exhaust Ventilation Systems	☐	☐
○	●	NRCA-PRC-15-F Fume Hood Automatic Sash Closure Systems	☐	☐



STATE OF CALIFORNIA

Process Systems

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Project Name: sweetgreen - 4S Commons	Report Page: Page 4 of 6
Project Address: 10562 Craftsman Way, #192, San Diego, CA 92127	Date Prepared: 05/27/2022

Table Continued

[1] *FOOTNOTE: Type II hoods do not have a max hood exhaust air rate per Part 6 §140.9(b)1B.*

O. LABORATORY AND FACTORY EXHAUST AND FUME HOODS

This Section Does Not Apply

P. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://ww2.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/.

YES	NO	Form/Title	Field Inspector	
			Pass	Fail
●	○	NRCI-PRC-01-E Covered Process	☐	☐

Q. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://ww2.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/.

YES	NO	Form/Title	Field Inspector	
			Pass	Fail
○	●	NRCA-PRC-01-F Compressed Air Systems	☐	☐
●	○	NRCA-PRC-02-F Kitchen Exhaust	☐	☐
○	●	NRCA-PRC-03-F Garage Exhaust	☐	☐
○	●	NRCA-PRC-04-F Refrigerated Warehouses - Evaporator Fan Motor Controls	☐	☐
○	●	NRCA-PRC-05-F Refrigerated Warehouses - Evaporative Condenser Controls	☐	☐
○	●	NRCA-PRC-06-Refrigerated Warehouses - Air Cooled Condenser Controls	☐	☐
○	●	NRCA-PRC-16-Refrigerated Warehouses - Adiabatic Condenser Controls	☐	☐
○	●	NRCA-PRC-07 Refrigerated Warehouses - Variable Speed Compressor	☐	☐
○	●	NRCA-PRC-08-F Refrigerated Warehouses - Electric Resistance Underslab Heating System	☐	☐
○	●	NRCA-PRC-12-F Elevator Lighting & Ventilation Controls	☐	☐

STATE OF CALIFORNIA

Process Systems

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1. I certify that this Certificate of Compliance documentation is accurate and complete.

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5. **I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.**

Responsible Designer Name:	Joshua Everett, P.E.	Responsible Designer Signature:	
Company :	Everj Engineering, Inc.	Date Signed:	06/22/2022
Address:	1509 Buck Trail Lane	License:	40567
City/State/Zip:	Worthington/OH/43085	Phone:	240-319-0822

Add Responsible Person | Remove Last

sg

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LOS ANGELES, CALIFORNIA 90018

ENGINEER OF RECORD:

EVERJ ENGINEERING, INC.
1509 BUCK TRAIL LANE
WORTHINGTON, OH 43085
240-319-0822
www.everjengineering.com

STAMP:

JOSHUA ADAM EVERETT
M 40567

10/05/2022

PROJECT INFORMATION:
4S COMMONS

PROJECT INFORMATION:
10562 CRAFTSMAN WAY
#192
SAN DIEGO, CA 92127

DRAWN BY:	JAE
CHECKED BY:	MK
PROJECT MANAGER:	JAE
SG DESIGN MANAGER:	KD
SG CONSTR. MANAGER:	KZ
PROJECT NO:	210017
TEMPLATE VERSION:	05/20/2022

REVISIONS

REV.	DATE	DESCRIPTION

ENERGY COMPLIANCE FORMS

M-023

10/5/2022 10:45:03 AM

SYMBOLS & ABBREVIATIONS

HVAC SYMBOLS

- MITERED CORNER WITH TURNING VANES
- W/H DUCTWORK INTERNAL FREE DIMENSIONS (WIDTH/HEIGHT)
- RECTANGULAR TO ROUND DUCT TRANSITION
- S DUCT-MOUNTED SMOKE DETECTOR
- M MOTOR-OPERATED DAMPER
- MANUAL VOLUME DAMPER
- GREASE DUCT CLEANOUT
- MITERED CORNER WITHOUT TURNING VANES
- CEILING DIFFUSER
- CEILING-MOUNTED RETURN OR EXHAUST REGISTER
- SUPPLY REGISTER
- RETURN REGISTER
- FLEXIBLE DUCT
- Ⓣ THERMOSTAT
- Ⓢ REMOTE TEMPERATURE SENSOR
- Ⓧ PLAN NOTE: SEE PLAN NOTES LISTED ON THE SAME SHEET FOR NOTE MEANING
- CONNECT TO EXISTING
- XX-# EQUIPMENT TAG: SEE EQUIPMENT SCHEDULE ON SHEET M-200 FOR EQUIPMENT INFORMATION
- A/V AUDIO/VISUAL REMOTE SMOKE DETECTOR ANNUNCIATOR WITH REMOTE KEY OPERATED RESET
- CD1 — TAG
- 12"Ø — NECK SIZE
- 350 — AIRFLOW [CFM]

HVAC ABBREVIATIONS

(E)	EXISTING
(R)	RELOCATED
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
BC	BLOWER COIL
CD	CEILING DIFFUSER
CU	CONDENSING UNIT
EF	EXHAUST FAN
ER	EXHAUST REGISTER
EXT'G	EXISTING
GC	GENERAL CONTRACTOR
HES	TENANT'S HVAC EQUIPMENT SUPPLIER
KES	TENANT'S KITCHEN EQUIPMENT SUPPLIER
OBD	BLADE DAMPER
PL	PLENUM
RG	RETURN GRILLE
RTU	ROOFTOP UNIT
SD	SLOT DIFFUSER
SR	SUPPLY REGISTER
VSC	VARIABLE SPEED CONTROL
WSHP	WATER SOURCE HEAT PUMP

CODED NOTES

1 INSTALL EQUIPMENT PER MANUFACTURER'S INSTALLATION INSTRUCTION AND PER THE STRUCTURAL DETAILS.

2 COORDINATE MOUNTING LOCATION FOR WALK-IN COOLER CONDENSING UNIT, CU-1 ON TOP OF THE WALK-IN COOLER WITH THE KITCHEN EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN. ENSURE ALL CLEARANCE REQUIREMENTS FOR THE UNIT ARE MAINTAINED THROUGH CONSTRUCTION. KITCHEN EQUIPMENT SUPPLIER SHALL PROVIDE LINESET, SPECIALTIES AND MAKE ALL FINAL CONNECTIONS BETWEEN THE CONDENSING UNIT AND EVAPORATOR COIL.

3 PROVIDE SUPPLY DIFFUSER CONNECTION PER DETAIL 1/SHEET M-400.

4 REFER TO THE ARCHITECTURAL RCP FOR CEILING MOUNTED EQUIPMENT LOCATION. TYPICAL.

5 PROVIDE AUDIO/VISUAL REMOTE SMOKE DETECTOR ANNUNCIATOR WITH REMOTE KEY OPERATED RESET. WIRE A UNIT BACK TO EACH SMOKE DETECTOR. MOUNT UNIT 60" AFF. TYPICAL.

6 PROVIDE "LIGHTSTAT" THERMOSTATS WITH LOCKABLE COVERS (HONEYWELL CG512A) FOR RTU-1 AND RTU-2 AT THIS LOCATION AT 48" AFF. COORDINATE WITH ELECTRICAL SWITCHING IN THE AREA AND EXTEND WIRING TO REMOTE TEMPERATURE SENSOR AND UNITS. LABEL EACH THERMOSTAT ACCORDINGLY. COORDINATE THERMOSTAT LOCATION WITH WALL-MOUNTED EQUIPMENT SO THAT THE THERMOSTATS ARE NOT BLOCKED BY SHELVING, COAT RACKS OR DOORS.

7 INSTALL THE TEMPERATURE SENSOR FOR THE HVAC EQUIPMENT NOTED AT THIS LOCATION AT 5'-0" AFF. COORDINATION LOCATION WITH EQUIPMENT AND WALL-MOUNTED FIXTURES AS REQUIRED SUCH THAT THE SENSOR IS NOT BLOCKED.

8 INSTALL THE TEMPERATURE SENSOR IN AN INSULATED JUNCTION BOX FOR THE HVAC EQUIPMENT NOTED AT THIS LOCATION AT 5'-0" AFF. COORDINATION LOCATION WITH EQUIPMENT AND WALL-MOUNTED FIXTURES AS REQUIRED SUCH THAT THE SENSOR IS NOT BLOCKED.

9 THE GENERAL CONTRACTOR SHALL FURNISH A REME HALO AIR PURIFICATION SYSTEM AND REQUIRED TRANSFORMER, PURCHASED THROUGH SWEETGREEN'S VENDOR (NATIONAL TAB) AND INSTALL SYSTEM IN THE SUPPLY AIR DUCTWORK AND PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. ADJUST AS REQUIRED FOR THE SUPPLY AIRFLOW.

10 THE GENERAL CONTRACTOR SHALL PROVIDE A UL 268A DUCT-MOUNTED SMOKE DETECTOR IN THE SUPPLY AIR STREAM. UPON DETECTION OF SMOKE, THE SUPPLY AIR FAN SHALL DE-ENERGIZE. COORDINATE ALL TIE-IN REQUIREMENTS WITH THE LANDLORD AND ALARM PROVIDER. C

11 PROVIDE DUCTED TRANSFER GRILLE IN LOCATION AS SHOWN.

12 INSTALL THE GC FURNISHED TYPE II HOOD, HD-2 IN LOCATION SHOWN. SUPPORT PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. INSTALL HOOD ACCORDING TO THE REQUIREMENTS OF IT'S LISTING, THE BUILDING CODE, ALL NFPA REQUIREMENTS AND THE LOCAL AUTHORITY HAVING JURISDICTIONS REQUIREMENTS.

13 PROVIDE DIFFUSER WITH DUCTWORK AND CAP AS SHOWN.

14 PAINT INTERIOR OF DUCTWORK VISIBLE FROM THE DINING ROOM BLACK. TYPICAL.

15 DUCTWORK UP/DOWN FROM MECHANICAL EQUIPMENT ON THE ROOF. REFER TO SHEET M-101 FOR MORE INFORMATION.

16 DUCTS AND PLENUMS SERVING TYPE II HOODS SHALL BE CONSTRUCTED OF RIGID METALLIC MATERIALS IN ACCORDANCE WITH CHAPTER 6 OF THE MECHANICAL CODE. DUCT BRACING AND SUPPORTS SHALL COMPLY WITH CHAPTER 6 OF THE MECHANICAL CODE. DUCTS SUBJECT TO POSITIVE PRESSURE SHALL BE ADEQUATELY SEALED. C

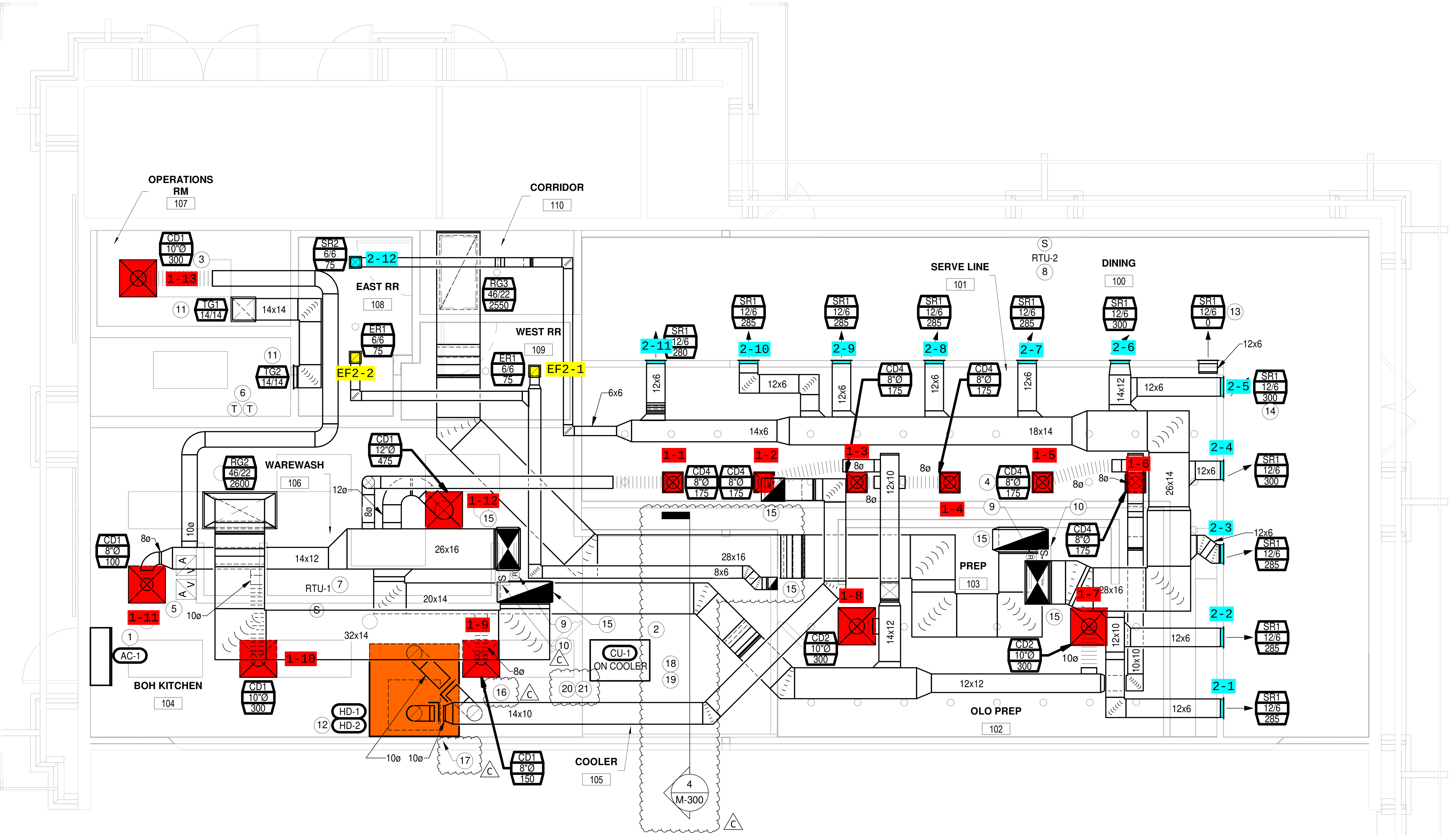
17 WALL CONSTRUCTION BEHIND THE HOD SHALL BE METAL STUD FRAMING WITH GYPSUM AND CEMENT BOARD SHEATHING WITH TILE AND STAINLESS STEEL FINISHES. REFER TO ARCHITECTURAL SHEET A-100 FOR MORE INFORMATION.

18 THE DESIGN OF THE WALK-IN COOLER, WITH A AREA LESS THAN 3,000 SQUARE FEET SHALL MEET THE REQUIREMENTS OF THE APPLIANCE EFFICIENCY REGULATIONS FOR WALK-IN COOLERS CONTAINED IN THE APPLIANCE EFFICIENCY REGULATIONS (CALIFORNIA CODE OF REGULATIONS, TITLE 20, SECTIONS 1601 THROUGH 1608).

19 REFRIGERANT-CONTAINING PARTS OF UNIT SYSTEMS SHALL BE TESTED AND PROVED TIGHT BY THE MANUFACTURER AT NOT LESS THAN THE DESIGN PRESSURE FOR WHICH THEY ARE RATED. PRESSURE VESSELS SHALL BE TESTED IN ACCORDANCE WITH SECTION 1117.0 ([ASHRAE 15:9.14.1] CMC 1116.1).

20 THE CONDENSING UNIT SHALL BE PROVIDED WITH A SUCTION LINE AND LIQUID LINE BASE VALVE ON EACH UNIT. REFER TO THE MANUFACTURER'S CUTSHEETS FOR MORE INFORMATION.

21 THERE SHALL BE A FUSIBLE PLUG ON THE RECEIVER TANK OF THE CONDENSING UNIT, SET TO MELT AT 430°F TO RELIEVE SYSTEM PRESSURE. C



1 **HVAC PLAN**
1/4" = 1'-0"

TRUE NORTH
PLAN NORTH

WALK-IN COOLER REFRIGERATION CALCULATIONS

SYSTEM CLASSIFICATION:	HIGH PROBABILITY
REFRIGERANT CLASSIFICATION:	R-448A; TYPE A1
REFRIGERANT PER OCCUPIED SPACE:	24 LBS / 1,000 CUBIC FEET
WALK-IN COOLER VOLUME:	896.6 CUBIC FEET
MAXIMUM REFRIGERANT PERMITTED:	21.5 LB
PROPOSED REFRIGERANT:	9.0 LB

NOTES:
1. THE GENERAL CONTRACTOR SHALL VERIFY ANY ADDITIONAL REFRIGERANT ADDED TO THE SYSTEM, AND VERIFY THAT TOTAL WEIGHT OF ALL REFRIGERANT DOES NOT EXCEED THE VALUES INDICATED IN THE ABOVE CALCULATIONS.

sg

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ENGINEER OF RECORD:
EVERJ ENGINEERING, INC.
1509 BUCK TRAIL LANE
WORTHINGTON, OH 43085
240-319-0822
www.everjengineering.com

STAMP:
PROFESSIONAL ENGINEER
JOSHUA ADAM EVERETT
M 40567
MECHANICAL
STATE OF CALIFORNIA
10/05/2022

PROJECT INFORMATION:
4S COMMONS

PROJECT INFORMATION:
10562 CRAFTSMAN WAY
#192
SAN DIEGO, CA 92127

DRAWN BY:	JAE
CHECKED BY:	MK
PROJECT MANAGER:	JAE
SG DESIGN MANAGER:	KD
SG CONSTR. MANAGER:	KZ
PROJECT NO:	210017
TEMPLATE VERSION:	05/20/2022

REVISIONS

REV.	DATE	DESCRIPTION
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HVAC PLAN

M-100

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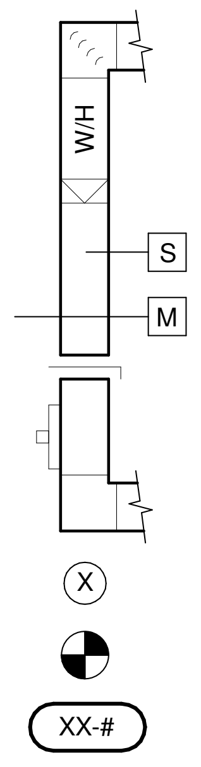
SYMBOLS & ABBREVIATIONS

HVAC SYMBOLS



- MITERED CORNER WITH TURNING VANES
- DUCTWORK INTERNAL FREE DIMENSIONS (WIDTH/HEIGHT)
- RECTANGULAR TO ROUND DUCT TRANSITION
- DUCT-MOUNTED SMOKE DETECTOR
- MOTOR-OPERATED DAMPER
- MANUAL VOLUME DAMPER
- GREASE DUCT CLEANOUT
- MITERED CORNER WITHOUT TURNING VANES
- PLAN NOTE: SEE PLAN NOTES LISTED ON THE SAME SHEET FOR NOTE MEANING
- CONNECT TO EXISTING
- EQUIPMENT TAG: SEE EQUIPMENT SCHEDULE ON SHEET M-300 FOR EQUIPMENT INFORMATION

HVAC ABBREVIATIONS

(E)	EXISTING
(R)	RELOCATED
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
BC	BLOWER COIL
CD	CEILING DIFFUSER
CU	CONDENSING UNIT
EF	EXHAUST FAN
ER	EXHAUST REGISTER
EXT'G	EXISTING
GC	GENERAL CONTRACTOR
HES	TENANT'S HVAC EQUIPMENT SUPPLIER
KES	TENANT'S KITCHEN EQUIPMENT SUPPLIER
OBD	BLADE DAMPER
PL	PLENUM
RG	RETURN GRILLE
RTU	ROOFTOP UNIT
SD	SLOT DIFFUSER
SR	SUPPLY REGISTER
VSC	VARIABLE SPEED CONTROL
WSHP	WATER SOURCE HEAT PUMP

CODED NOTES

1 INSTALL EQUIPMENT PER MANUFACTURER'S INSTALLATION INSTRUCTION AND PER THE STRUCTURAL DETAILS.

2 EXISTING ROOFTOP UNIT, PROVIDED BY THE LANDLORD TO REMAIN. FIELD-VERIFY MODEL NUMBER AND EXACT LOCATION. NOTIFY THE AOR IF THERE ARE ANY DISCREPANCIES BETWEEN THE EXISTING EQUIPMENT AND THE SPECIFIED UNITS ON SHEET M-200.

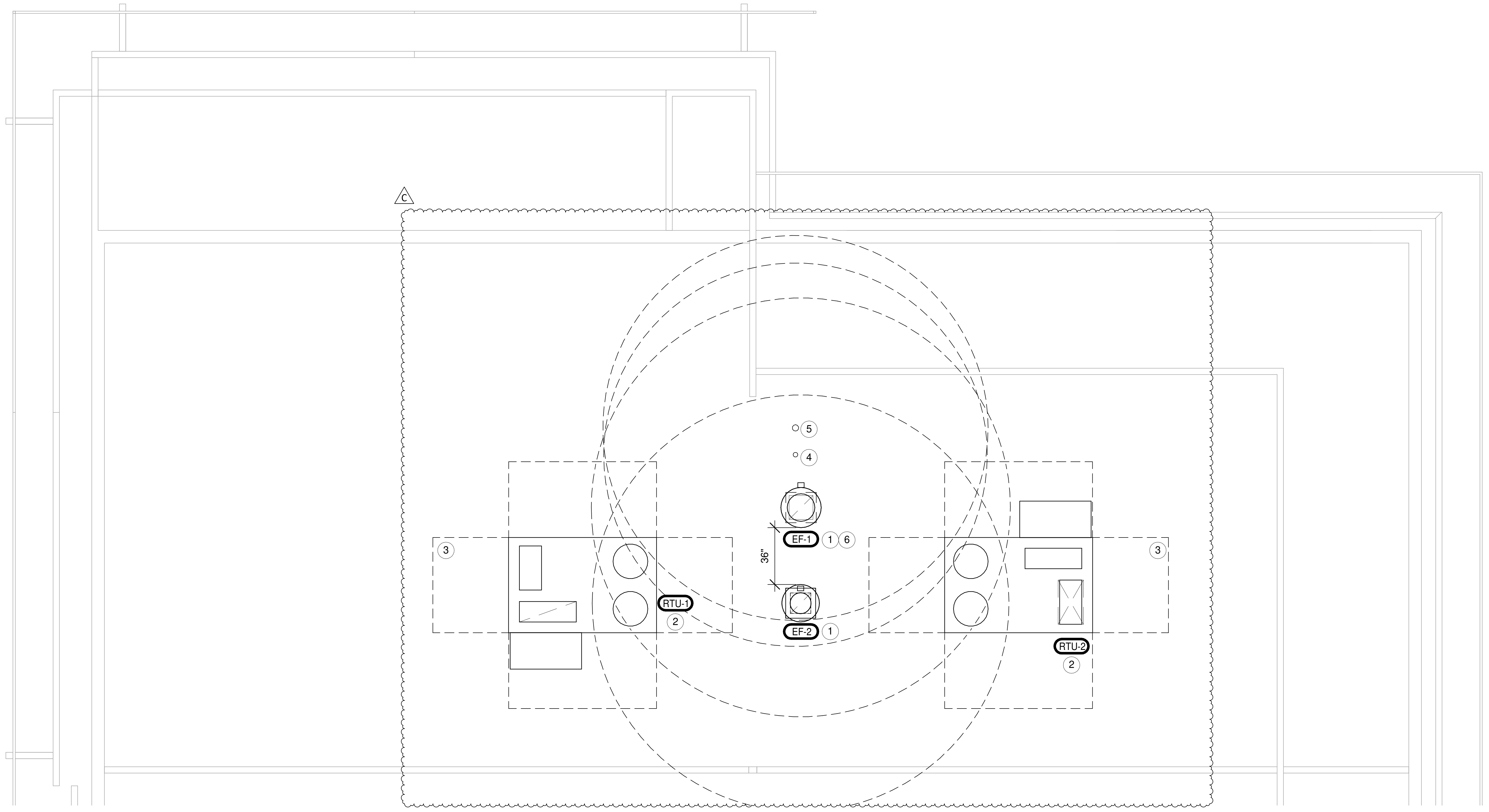
3 MAINTAIN THE MANUFACTURER'S RECOMMENDED CLEARANCE ZONES. COORDINATE WITH SITE CONDITIONS AND WORK OF OTHER TRADES AS REQUIRED. TYPICAL.

4 LOCATION OF THE 3" VENT THROUGH THE ROOF. MAINTAIN A MINIMUM OF 10'-0" FROM ALL MECHANICAL INTAKES.

5 LOCATION OF THE 4" WATER HEATER VENT THROUGH THE ROOF. MAINTAIN A MINIMUM OF 10'-0" FROM ALL MECHANICAL INTAKES.

6 INSTALL ROOF FAN SO THAT THE TERMINATION OF THE FAN IS NO LESS THAN 40" ABOVE THE TOP OF THE ROOF.

C



TRUE NORTH PLAN NORTH

1 **HVAC ROOF PLAN**
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HVAC ROOF PLAN

M-101

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MATERIAL SCHEDULE

CATEGORY	APPLICATION	ALLOWABLE MATERIAL
DUCT	EXPOSED, SUPPLY	ROUND AS SHOWN. PAINTED TO MATCH ROOF DECK.
	EXPOSED, RETURN	ROUND AS SHOWN. PAINTED TO MATCH ROOF DECK.
	EXPOSED, GEN. EXHAUST	DOUBLE-WALL INSULATED ROUND AS SHOWN. PAINTED TO MATCH ROOF DECK.
	EXPOSED, VENTILATION AIR	DOUBLE-WALL INSULATED ROUND AS SHOWN. PAINTED TO MATCH ROOF DECK.
	CONCEALED, SUPPLY	RECTANGULAR OR ROUND AS SHOWN. INSULATED.
	CONCEALED, RETURN	RECTANGULAR OR ROUND AS SHOWN. INSULATED.
	CONCEALED, GEN. EXHAUST	RECTANGULAR OR ROUND AS SHOWN. INSULATED.
	CONCEALED, VENTILATION AIR	RECTANGULAR OR ROUND AS SHOWN. INSULATED
PIPING	HYDRONIC PIPING: HOT, CHILLED AND CONDENSER WATER	TYPE L COPPER TUBE.
	CONDENSATE DRAINS	SCHEDULE 40 PVC PIPE AND FITTINGS.

AIR BALANCE SCHEDULE

TAG	SUPPLY AIRFLOW (CFM)	RETURN AIRFLOW (CFM)	OUTSIDE AIRFLOW (CFM)	EXHAUST AIRFLOW (CFM)	SUBTOTAL (CFM)
EF-1	0	0	0	725	-725
EF-2	0	0	0	150	-150
RTU-1	2975	2600	375	0	375
RTU-2	3250	2550	700	0	700
Net Pressurization [CFM]					200

EXHAUST SCHEDULE

PER TABLE 403.7 OF THE 2019 CALIFORNIA MECHANICAL CODE

CATEGORY	AREA (SF)	NUMBER OF FIXTURES	AIR RATE		EXHAUST REQUIRED (CFM)		EXHAUST REQUIRED (CFM)	EXHAUST PROVIDED (CFM)
			CFM / FIXTURE	CFM / SF	FIXTURES	FLOOR AREA		
KITCHEN	1014.4	0	0.00	-0.70	0.0	-710.1	-710.1	-725.0
RESTROOMS	110.6	2	-70.00	0.00	-140.0	0.0	-140.0	-150.0
TOTAL							-850.1	-875.0

VENTILATION SCHEDULE

PER TABLE 402.1 OF THE 2019 CALIFORNIA MECHANICAL CODE

CATEGORY	OCCUPANT DENSITY (# / 1000 SF)	AREA (SF)	OCCUPANCY BY AREA (PEOPLE)	AIR RATE (CFM)		VENTILATION REQUIRED (CFM)		EFFECTIVENESS	VENTILATION REQUIRED (CFM)	VENTILATION PROVIDED (CFM)
				CFM / PERSON	CFM / SF	OCCUPANCY	FLOOR AREA			
CORRIDOR	0	37.6	0	0.00	0.06	0.0	2.3	0.8	2.8	5.0
DINING ROOM	70	520.3	37	7.50	0.18	277.5	93.7	0.8	463.9	695.0
KITCHEN	20	1014.4	21	7.50	0.12	157.5	121.7	0.8	349.0	355.0
OFFICE	5	134.0	1	5.00	0.06	5.0	8.0	0.8	16.3	20.0
TOTAL									832.1	1075.0

GRILLS, REGISTERS, AND DIFFUSERS SCHEDULE

TAG	DESCRIPTION	FACE SIZE	MATERIAL	FINISH	MOUNTING	SUPPLIER	INSTALLER	MANUFACTURER	MODEL	REMARKS
CD1	PERFORATED CEILING DIFFUSER	24" x 24"	ALUMINUM	WHITE	LAY-IN	GC	GC	TITUS	PCS-AA	PROVIDE INTEGRAL OBD
CD2	PERFORATED CEILING DIFFUSER	24" x 24"	ALUMINUM	WHITE	GYPSUM BOARD	GC	GC	TITUS	PCS-AA	PROVIDE INTEGRAL OBD
CD4	PERFORATED CEILING DIFFUSER	12" x 12"	ALUMINUM	WHITE	GYPSUM BOARD	GC	GC	TITUS	PCS-AA	PROVIDE INTEGRAL OBD
ER1	0° FIXED BLADE EXHAUST GRILL	8" x 8"	ALUMINUM	WHITE	GYPSUM BOARD	GC	GC	TITUS	355ZFL	PROVIDE INTEGRAL OBD
RG2	PERFORATED CEILING RETURN	48" x 24"	ALUMINUM	WHITE	LAY-IN	GC	GC	TITUS	PAR-AA	
RG3	PERFORATED CEILING RETURN	48" x 24"	ALUMINUM	WHITE	GYPSUM BOARD	GC	GC	TITUS	PAR-AA	
SR1	DOUBLE DIRECTIONAL SUPPLY REGISTER	14" x 8"	STEEL	WHITE	SURFACE	GC	GC	TITUS	300RL	PROVIDE INTEGRAL OBD
SR2	DOUBLE DIRECTIONAL SUPPLY REGISTER	8" x 8"	STEEL	WHITE	SURFACE	GC	GC	TITUS	300FL	PROVIDE INTEGRAL OBD
TG1	PERFORATED CEILING RETURN	16"x16"	ALUMINUM	WHITE	GYPSUM BOARD	GC	GC	TITUS	PAR-AA	
TG2	0° FIXED BLADE EXHAUST GRILL	16"x16"	ALUMINUM	WHITE	GYPSUM BOARD	GC	GC	TITUS	355ZFL	PROVIDE INTEGRAL OBD

RECIRCULATING HOOD SCHEDULE

TAG	DESCRIPTION	MAX COOKING TEMP.	EXHAUST PLENUM AIRFLOW [CFM]	APPROXIMATE WEIGHT [lbs]	SUPPLIER	INSTALLER	ELECTRICAL DATA		BASIS FOR DESIGN		REMARKS
							WATTS	V/P/H	MANUFACTURER	MODEL	
HD-1	VENTLESS CANOPY RECIRCULATING HOOD	N/A	415	175	OWNER	OWNER	170 W	120/1/60	RATIONAL	60.76.177	UL 710B COOKING APPLIANCE WITH A GREASE DISCHARGE LESS THAN 5.0 E-06 KG/CUBIC METER WHERE OPERATED WITH A TOTAL AIRFLOW OF 500 CFM

FAN SCHEDULE

TAG	EXHAUST AIRFLOW (CFM)	E.S.P. (IN. W.C.)	DRIVE TYPE	MOTOR POWER (HP)	WEIGHT (LBF)	ELECTRICAL			SUPPLIER	INSTALLER	MANUFACTURER	MODEL	SPECIAL REMARKS
						MCA (A)	MOCP (A)	V/P/H					
EF-1	725	0.8	DIRECT	0.33	100	5.4	15	120/1/60	GC	GC	CAPTIVEAIRE	DU33HFA	FURNISHED WITH DISCONNECT, SPEED CONTROLLER, BACKDRAFT DAMPER AND 22" TALL ROOF CURB.
EF-2	150	0.6	DIRECT	0.25	100	3.7	15	120/1/60	GC	GC	CAPTIVEAIRE	DR12HFA	FURNISHED WITH DISCONNECT, SPEED CONTROLLER, BACKDRAFT DAMPER AND 14" TALL ROOF CURB.

AIR CURTAIN SCHEDULE

TAG	DESCRIPTION	OPENING WIDTH	AIRFLOW			ELECTRICAL			SUPPLIER	INSTALLER	MANUFACTURER	MODEL	REMARKS
			MAX VELOCITY (FPM)	AVERAGE VELOCITY (FPM)	AIRFLOW (CFM)	MOCP (A)	MCA (A)	V/P/H					
AC-1	KITCHEN DOOR AIR CURTAIN	36"	3600	2118	1036	20	3.4	120/1/60	GC	GC	BERNER	MAX1036A	FURNISHED WITH DOOR-ACTIVATED SWITCH

TYPE II HOOD SCHEDULE

TAG	DESCRIPTION	HOOD CONSTRUCTION			MAXIMUM COOKING TEMPERATURE (DEG. F)	EXHAUST COLLARS			WEIGHT (LBF.)	SUPPLIER	INSTALLER	MANUFACTURER	MODEL	REMARKS
		WIDTH	DEPTH	MATERIAL		AIRFLOW (CFM)	DIAMETER (IN)	PRESSURE DROP (IN. W.G.)						
HD-2	TYPE II CANOPY HOOD	58"	60"	430 STAINLESS STEEL	700	725	10"	0.09	200	GC	GC	CAPTIVEAIRE	6012 VHB	

CONDENSING UNIT SCHEDULE

TAG	DESCRIPTION	PAIRED WITH	NOMINAL CAPACITY (TONS)	NUMBER OF COMPRESSORS	REFRIGERANT TYPE	WEIGHT (LB)	ELECTRICAL			SUPPLIER	INSTALLER	MANUFACTURER	MODEL	REMARKS
							MOCP (A)	MCA (A)	V/P/H					
CU-1	WALK-IN COOLER REMOTE CONDENSING UNIT	N/A	0	1	R448A	260	25	16.3	208/1/60	KES	KES	BY KES	BY KES	FURNISHED WITH THE WALK-IN COOLER.

ROOFTOP UNIT, HEAT PUMP SCHEDULE

TAG	DESCRIPTION	COOLING CAPACITY (TONS)	EER	AIRFLOW				COOLING				HEATING			NUMBER OF COMPRESSORS	ELECTRICAL			SUPPLIER	INSTALLER	MANUFACTURER	MODEL	REMARKS
				TOTAL (CFM)	RETURN (CFM)	OA (CFM)	E.S.P. (IN. W.C.)	EAT (DEG. F)		NET TOTAL (MBH)	NET SENSIBLE (MBH)	EAT (DEG. F)	LAT (DEG. F)	OUTPUT (MBH)		MOCP (A)	MCA (A)	V/P/H					
								DB	WB														
RTU-1	KITCHEN ROOFTOP UNIT	8.5	11	2975	2600	375	0.8	73.7	64.4	93.5	63.8	66.6	89.6	90.1	2	60	48.7	208/3/60	EXISTING	EXISTING	DAIKIN	DBH102	UNIT PROVIDED BY THE LANDLORD WITH ULTRA LOW-LEAK DOWNFLOW ECONOMIZER WITH ENTHALPY SENSOR AND MERV-13 FILTERS.
RTU-2	DINING ROOM ROOFTOP UNIT	8.5	11	3250	2550	700	0.8	74.6	63.8	91.7	56.5	64.4	94.1	90.1	2	60	48.7	208/3/60	EXISTING	EXISTING	DAIKIN	DBH102	UNIT PROVIDED BY THE LANDLORD WITH ULTRA LOW-LEAK DOWNFLOW ECONOMIZER WITH ENTHALPY SENSOR AND MERV-13 FILTERS.

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PROJECT MANAGER:	JAE
SG DESIGN MANAGER:	KD
SG CONSTR. MANAGER:	KZ
PROJECT NO:	210017
TEMPLATE VERSION:	05/20/2022

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HVAC SCHEDULES

M-200

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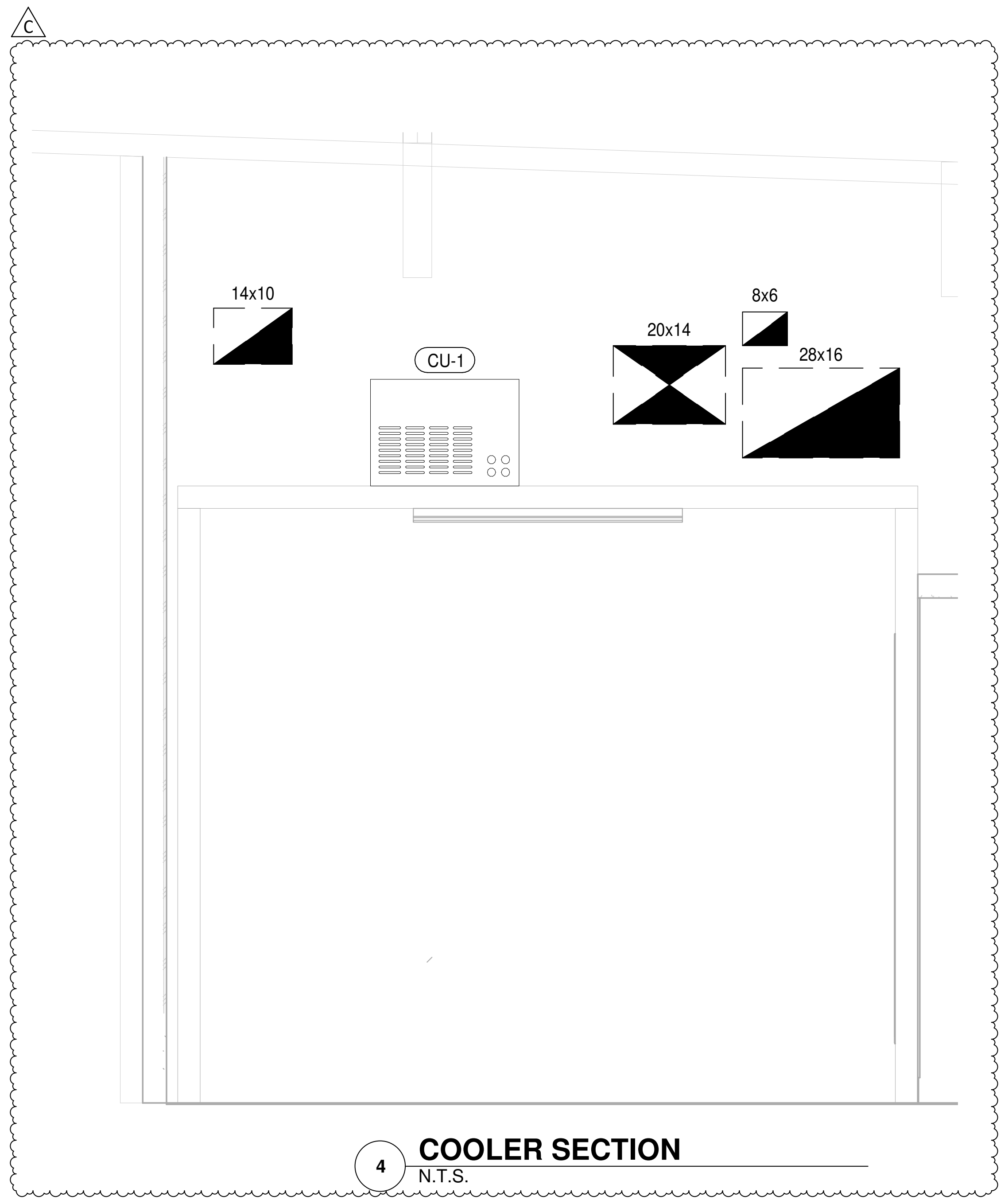


④ **COOLER SECTION**
N.T.S.

SEQUENCE OF OPERATIONS RTU-1 & RTU-2

OCCUPIED MODE:
FAN OPERATION/OUTSIDE AIR DAMPER: WHEN SCHEDULED BY THE THERMOSTAT TO BE IN OCCUPIED MODE, THE ROOFTOP UNIT FANS ARE TO START AND RUN CONTINUOUSLY AND THE OUTSIDE AIR DAMPERS SHALL MODULATE TO THE MINIMUM POSITION.
HEATING: ON A FALL IN SPACE TEMPERATURE BELOW THE SETPOINT OF 70 DEGREES (ADJUSTABLE) THE FIRST STAGE OF HEATING SHALL BE ENERGIZED TO MAINTAIN THE SETPOINT. UPON A CONTINUED FALL IN SPACE TEMPERATURE, THE SECOND STAGE SHALL BE ENERGIZED (WHERE APPLICABLE) TO MAINTAIN THE SETPOINT.
COOLING: ON A RISE IN SPACE TEMPERATURE ABOVE THE SETPOINT OF 72 DEGREES (ADJUSTABLE), WHEN THE ENTHALPY OF THE OUTSIDE AIR IS FAVORABLE, THE OUTSIDE AIR DAMPER SHALL MODULATE OPEN UP TO 100% TO PROVIDE COOLING FOR THE SPACE. WHEN THE ENTHALPY OF THE OUTSIDE AIR IS NOT FAVORABLE, OR THERE IS A SUDDEN DEMAND FOR SPACE COOLING, THE OUTSIDE AIR DAMPER SHALL MODULATE TO THE MINIMUM POSITION AND THE COOLING SHALL BE ENERGIZED AS REQUIRED TO MAINTAIN THE SETPOINT.

UNOCCUPIED MODE:
FAN OPERATION/OUTSIDE AIR DAMPER: WHEN SCHEDULED BY THE THERMOSTAT TO BE IN UNOCCUPIED MODE, THE ROOFTOP UNIT FANS ARE TO BE OFF AND THE OUTSIDE AIR DAMPERS SHALL REMAIN CLOSED.
HEATING: ON A FALL IN SPACE TEMPERATURE BELOW THE SETPOINT OF 55 DEGREES (ADJUSTABLE) THE ROOFTOP UNIT FAN SHALL START AND THE FIRST STAGE OF HEATING SHALL BE ENERGIZED TO MAINTAIN THE SETPOINT. UPON A CONTINUED FALL IN SPACE TEMPERATURE, THE SECOND STAGE SHALL BE ENERGIZED (WHERE APPLICABLE) TO MAINTAIN THE SETPOINT.
COOLING: ON A RISE IN SPACE TEMPERATURE ABOVE THE SETPOINT OF 85 DEGREES (ADJUSTABLE) THE ROOFTOP UNIT FAN SHALL START. WHEN THE ENTHALPY OF THE OUTSIDE AIR IS FAVORABLE, THE OUTSIDE AIR DAMPER SHALL MODULATE OPEN UP TO 100% TO PROVIDE COOLING FOR THE SPACE. WHEN THE ENTHALPY OF THE OUTSIDE AIR IS NOT FAVORABLE, OR THERE IS A SUDDEN DEMAND FOR SPACE COOLING, THE OUTSIDE AIR DAMPER SHALL REMAIN IN THE CLOSED POSITION AND THE COOLING SHALL BE ENERGIZED AS REQUIRED TO MAINTAIN THE SETPOINT.

EMERGENCY MODE:
FAN OPERATION/OUTSIDE AIR DAMPER: UPON A SIGNAL FROM THE FIRE ALARM SYSTEM, THE FAN SHALL STOP AND THE OUTSIDE AIR DAMPER SHALL CLOSE

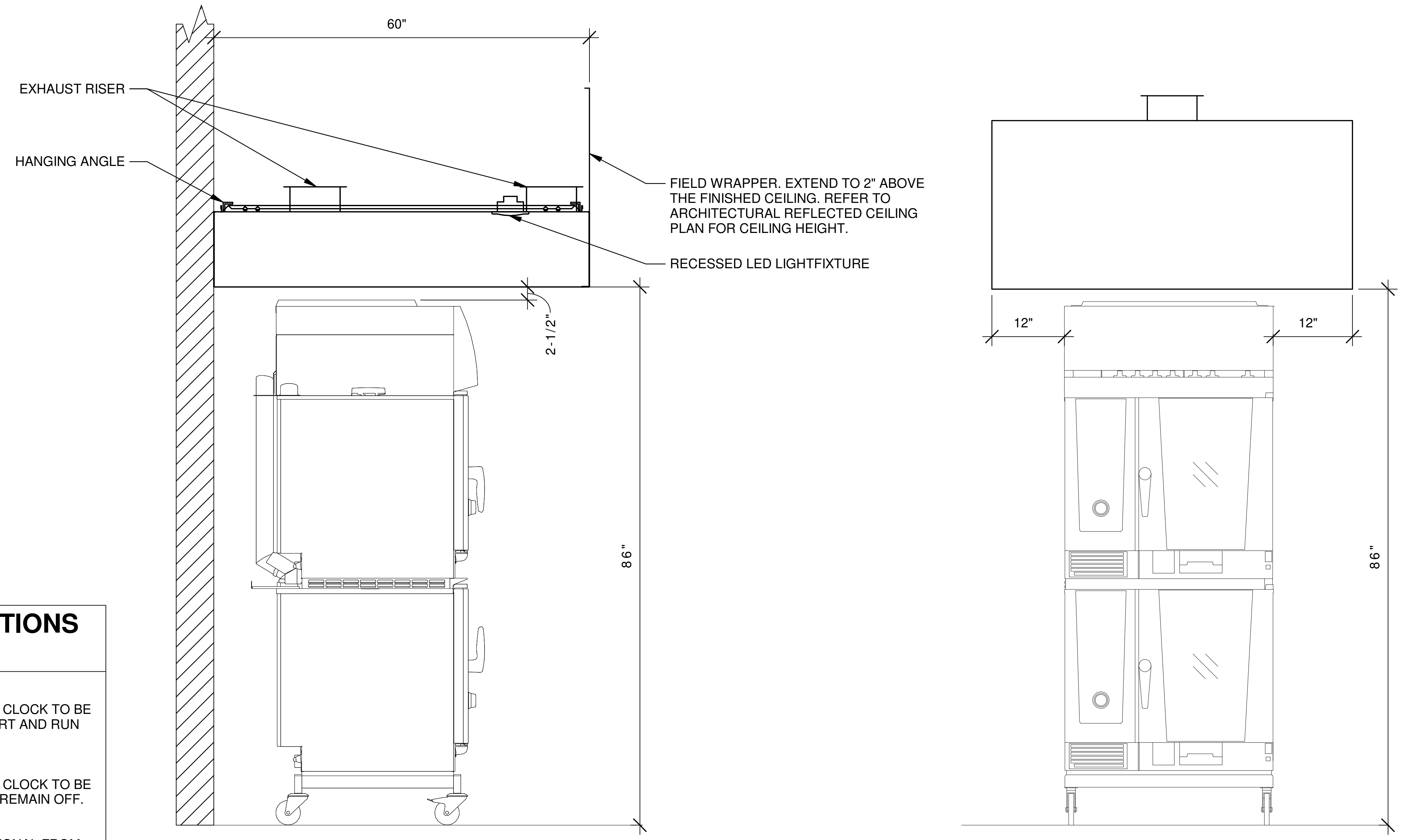
SEQUENCE OF OPERATIONS EF-1 & EF-2

OCCUPIED MODE:
FAN OPERATION: WHEN SCHEDULED BY THE TIME CLOCK TO BE IN OCCUPIED MODE, THE EXHAUST FAN IS TO START AND RUN CONTINUOUSLY.

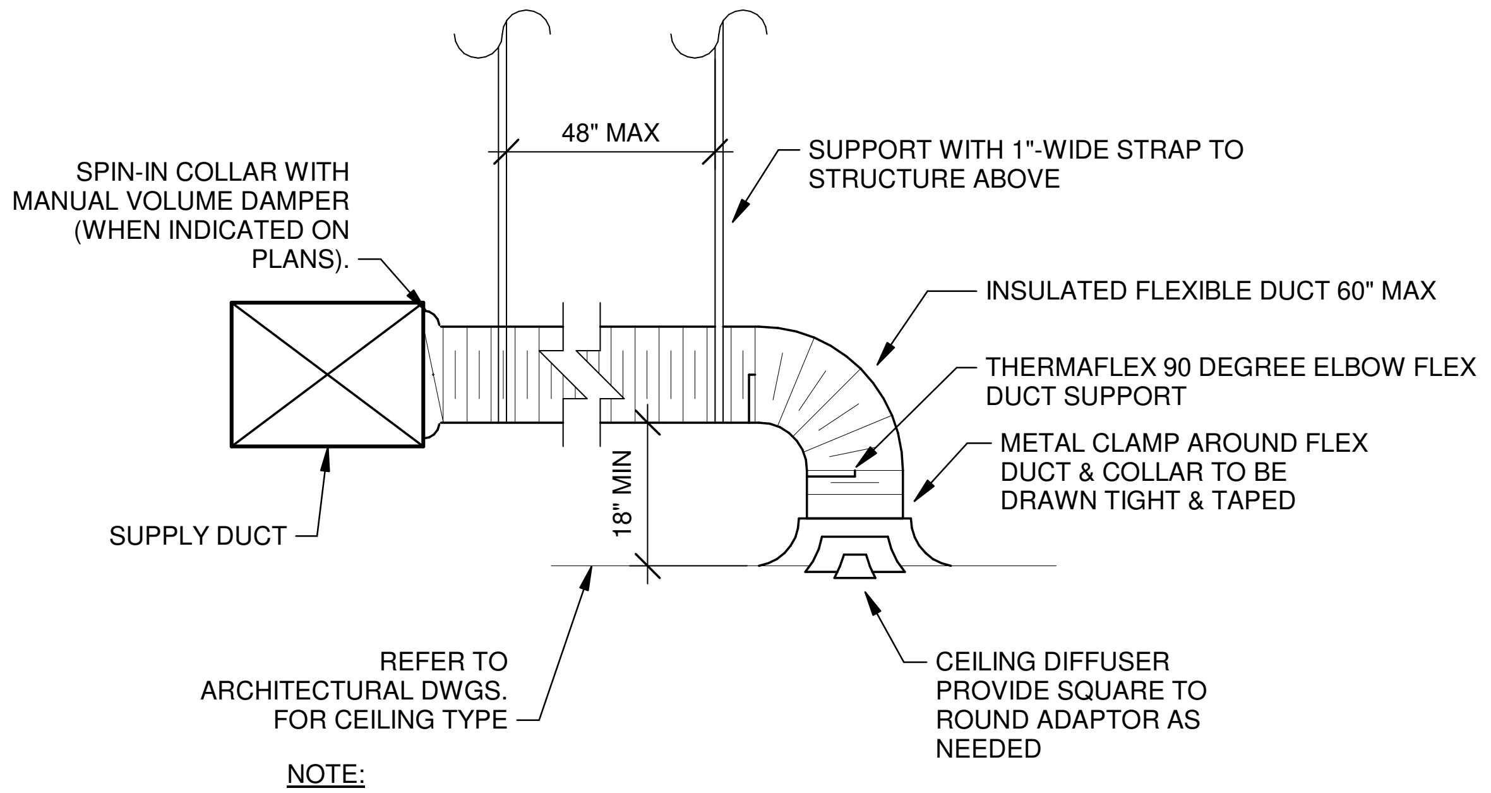
UNOCCUPIED MODE:
FAN OPERATION: WHEN SCHEDULED BY THE TIME CLOCK TO BE IN UNOCCUPIED MODE, THE EXHAUST FAN SHALL REMAIN OFF.

EMERGENCY MODE:
FAN OPERATION/OUTSIDE AIR DAMPER: UPON A SIGNAL FROM THE FIRE ALARM SYSTEM, THE FAN SHALL STOP.

② **SEQUENCE OF OPERATIONS**
N.T.S.



③ **HOOD ELEVATIONS**
N.T.S.



NOTE:
1. METHOD OF INSTALLATION FOR AIRTIGHT SEAL IS TYPICAL FOR ALL FLEX CONNECTIONS TO AIR DISTRIBUTION DEVICES.

① **DIFFUSER CONNECTION**
N.T.S.

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